EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L2	236	l1 and muscarinic	US-PGPUB; USPAT	OR	ON	2007/11/29 15:16

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L1             STRUCTURE UPLOADED
L2               0 S L1
L3              60 S L1 FULL

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L4              23 S L3

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L1             STR
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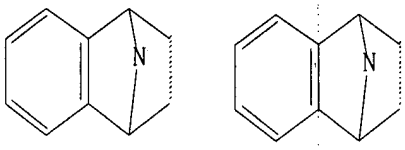


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Structure attributes must be viewed using STN Express query preparation.
L3              60 SEA FILE=REGISTRY SSS FUL L1
L4              23 SEA FILE=CAPLUS ABB=ON  PLU=ON  L3


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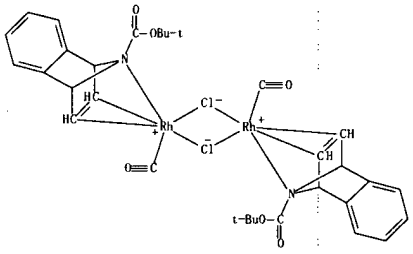
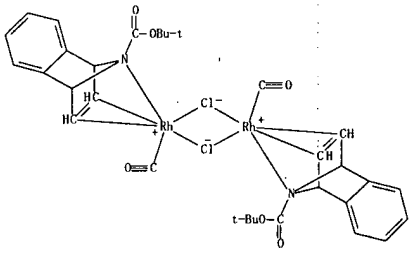
L4 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:589519 CAPLUS
DOCUMENT NUMBER: 145:220446
TITLE: A new class of laser dyes. 2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones, with unity fluorescence yield
AUTHOR(S): Wang, Chao-Yu; Yeh, Yu-Shan; Li, Elise Y.; Liu, Yi-Hong; Peng, Shiuh-Ming; Liu, Shiuh-Tzung; Chou, Pi-Tai
CORPORATE SOURCE: Department of Chemistry and Instrumentation Center, National Taiwan University, Taipei, 106, Taiwan
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2006), (25), 2693-2695
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:220446
ABSTRACT:
A new class of highly fluorescent dyes, 4,8-diphenyl-2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones (1a-c), were synthesized, they all exhibit unity fluorescence quantum yield and short radiative lifetime (< 4 ns) in common organic solvents and demonstrated remarkable amplified spontaneous emission with a gain efficiency of > 10.

IT 898258-61-2
RL: CAT (Catalyst use); USES (Uses)
(new class of laser dyes, 2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones, with unity fluorescence yield)
RN 898258-61-2 CAPLUS
CN Rhodium, dicarbonyldi-μ-chlorobis[(2,3-η)-1,1-dimethylethyl 1,4-dihydronaphthalen-1,4-imine-9-carboxylate-κN9]di-, stereoisomer (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:427347 CAPLUS
DOCUMENT NUMBER: 145:188529
TITLE: Rhodium-Catalyzed Ring-Opening Reactions of N-Boc-Azabenzonorbornadienes with Amine Nucleophiles
AUTHOR(S): Cho, Yong-hwan; Zunic, Valentin; Senboku, Hisanori; Olsen, Madeline; Lautens, Mark
CORPORATE SOURCE: Davenport Laboratories, Department of Chemistry, University of Toronto, Toronto, ON, M5H 3H6, Can.
SOURCE: Journal of the American Chemical Society (2006), 128(21), 6837-6846
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:188529
ABSTRACT:
In the presence of a rhodium catalyst (5 mol %) generated in situ from [Rh(cod)Cl]2 and (S,S')-(R,R')-C2-ferriphos, the asym. ring-opening reaction of azabenzonorbornadienes with various aliphatic and aromatic amines proceeded with high enantioselectivity (≤ 99% ee) to give 1,2-dihydronaphthalene-1,2-diamines in high yields. In the specific case of pyrrolidine as nucleophile, Et3NHCl was necessary as an additive for good reactivity and enantioselectivity. Addnl., a practical protocol was developed for the ring-opening of N-tert.-butoxycarbonyl-7-azabenzonorbornadiene with volatile amines at elevated temps. and standard pressure, using R2NH.HI and (Me2CH)2NEt. The exptl. results showed that the nature of the chiral ligand has the significant impact on the reactivity of the catalyst and the use of excess amount (2.2 equiv to Rh) of the chiral ligand plays an important role to improve the enantioselectivity in the present asym. reaction.

IT 898258-61-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure of a rhodium complex which may be an intermediate in the stereoselective and enantioselective rhodium-catalyzed ring opening of N-Boc-azabenzonorbornadienes with amines)
RN 898258-61-2 CAPLUS
CN Rhodium, dicarbonyldi-μ-chlorobis[(2,3-η)-1,1-dimethylethyl 1,4-dihydronaphthalen-1,4-imine-9-carboxylate-κN9]di-, stereoisomer (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1103428 CAPLUS
DOCUMENT NUMBER: 143:386757
TITLE: Preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists
INVENTOR(S): Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramane I.; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005094251	A2	20051013	WO 2004-US8025	20040317
WO 2005094251	A3	20060330		
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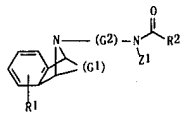
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725238	A2	20061129	EP 2004-821844	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529511	T	20071025	JP 2007-503875	20040317
US 2007185148	A1	20070809	US 2006-598885	20060914
PRIORITY APPLN. INFO.:			WO 2004-US8025 W	20040317

OTHER SOURCE(S): MARPAT 143:386757
GRAPHIC IMAGE:

L4 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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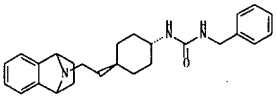


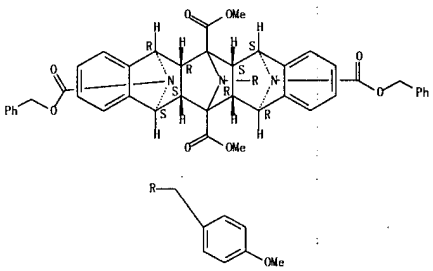
II

ABSTRACT:
Title compds. I [Z1 = H or alkyl; R1 = H, halo, C(O)aryl, etc.; G1 = CH2CH2 or CH=CH; G2 = alkyl or substituted cyclohexyl; R2 = XAr, XAr1YAr2 or NR3Z(Ar)n; X = bond, NR3 or alkyl; R3 = H (un)substituted alkyl or alkylaryl; Z = (un)substituted alkyl or alkyl-Y2 or Z and R3 or Z and Ar may form 4-7 membered ring; Ar = (un)substituted aryl, aromatic heterocycle, heterobicyclic ring system, etc.; Ar1 and Ar2 independently = (un)substituted Ph or aromatic heterocycle; Y = bond, NHCO, CONH, etc.; Y2 = NR3, O, S, etc.; n = 0-3] and their pharmaceutically acceptable salts, are prepared and disclosed as antagonists of M3 muscarinic acetylcholine receptors. Thus, e.g., II was prepared by coupling of 1,2,3,4-tetrahydro-1,4-epiazano-naphthalene with [4-(2-oxo-ethyl)-cyclohexyl]-carbamic acid tert-Bu ester followed by deprotection and subsequent benzylation using benzyl isocyanate. The inhibitory activity of I was evaluated using receptor-activated calcium mobilization assay (no data). I as antagonist of M3 muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compns. comprising I are disclosed.

IT 866565-80-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists)
RN 866565-80-2 CAPLUS
CN Urea, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

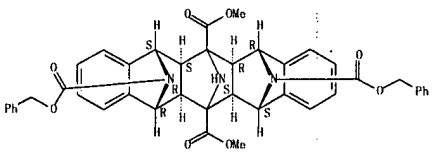
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L4 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



IT 336611-53-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of NH-tridents via deprotection of N-protected NH-tridents)
RN 336611-53-1 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,12α,12aβ,13α,13aβ,14α)- (9CI) (CA INDEX NAME)

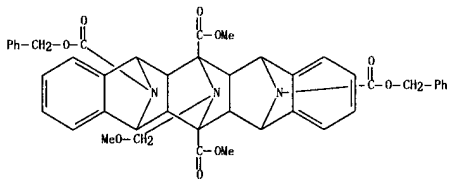
Relative stereochemistry.



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:618315 CAPLUS
DOCUMENT NUMBER: 144:311929
TITLE: Current status of synthesis of deprotected tridents by substituent variations of aza-ACE reaction
AUTHOR(S): Margetic, Davor; Butler, Douglas N.; Warrener, Ronald N.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, Queensland, 4702, Australia
SOURCE: International Electronic Conferences on Synthetic Organic Chemistry, 5th, 6th, Sept. 1-30, 2001 and 2002 [and] 7th, 8th, Nov. 1-30, 2003 and 2004 (2004), 843-852. Editor(s): Seijas, Julio A. Molecular Diversity Preservation International: Basel, Switz. CODEN: 69GTCO
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:311929
ABSTRACT:
A procedure for deprotection of N-protected NH-tridents is reported. Several N-protected tridents were deprotected using TFA, ionic hydrogenation, or catalytic hydrogenation, to give the NH-tridents.

IT 880097-27-8 880097-28-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of NH-tridents via deprotection of N-protected NH-tridents)
RN 880097-27-8 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(methoxymethyl)-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7,alpha.,12α,12aβ,13α,13aβ,14α)- (9CI) (CA INDEX NAME)



RN 880097-28-9 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-[(4-methoxyphenyl)methyl]-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,12α,12aβ,13α,13aβ,14α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:134424 CAPLUS
DOCUMENT NUMBER: 142:392314
TITLE: The Pyrrole Approach toward the Synthesis of Fully Functionalized Cup-Shaped Molecules
AUTHOR(S): Zonta, Cristiano; Fabris, Fabrizio; De Lucchi, Ottorino
CORPORATE SOURCE: Dipartimento di Chimica, Universita Ca' Foscari di Venezia, Venice, I-30123, Italy
SOURCE: Organic Letters (2005), 7(6), 1003-1006 CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:392314
ABSTRACT:
A novel method for the synthesis of new highly functionalized cyclotrimers is described. The method consists of an original synthesis of β-dibromopyrroles, metalation, cycloaddn., and cyclotrimerization. The sequence is highly compatible with common functional groups and allows the construction of cup-shaped mols. functionalized both at the upper and bottom rim. This feature makes the newly formed structures useful scaffolds for the development of supramol. receptors.

IT 849939-32-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclotrimers of azabicycloheptenes from pyrrole)
RN 849939-32-8 CAPLUS
CN Trinaphthylene-5,18:6,11:12,17-triimine, 5,6,11,12,17,18-hexahydro-19,20,21-tris[(4-methylphenyl)sulfonyl]-, (5R,6R,11S,12R,17S,18S)-rel- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 849939-29-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclotrimers of azabicycloheptenes from pyrrole)
RN 849939-29-3 CAPLUS
CN Trinaphthylene-5,18:6,11:12,17-triimine, 5,6,11,12,17,18-hexahydro-19,20,21-tris[(4-methylphenyl)sulfonyl]-, (5R,6S,11R,12S,17R,18S)-rel- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:902087 CAPLUS
DOCUMENT NUMBER: 141:379801
TITLE: A preparation of naphthalele-1,4-imine derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
INVENTOR(S): Busch-Petersen, Jakob; Laine, Dramane I.; Palovich, Michael R.; McCleland, Brent W.
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004091482	A2	20041028	WO 2004-US10641	20040407
WO 2004091482	A3	20041223		
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2005094835	A1	20051013	WO 2004-US8032	20040317
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725564	A1	20061129	EP 2004-821846	20040317
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EP 1725241	A1	20061129	EP 2004-821848	20040317
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L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

JP 2007529513	T	20071025	JP 2007-503877	20040317
JP 2007529514	T	20071025	JP 2007-503878	20040317
EP 1613307	A2	20060111	EP 2004-749817	20040407
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JP 2006522161	T	20060928	JP 2006-509761	20040407
US 2006211758	A1	20060921	US 2005-552492	20051007
US 7232841	B2	20070619		
US 2007149598	A1	20070628	US 2006-598882	20060914
US 2007185088	A1	20070809	US 2006-598888	20060914

PRIORITY APPLN. INFO.:

US 2003-460860P	P	20030407
WO 2004-US8027	W	20040317
WO 2004-US8032	W	20040317
WO 2004-US10641	W	20040407

OTHER SOURCE(S): MARPAT 141:379801
GRAPHIC IMAGE:

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

ABSTRACT:
The invention relates to a preparation of novel naphthalele-1,4-imine derivs. of formula I [wherein: R is H, halogen, alkyl, alkanoyl, or aroyl; Y is alkyl, (CH2)2-(cyclohex-1,4-diyl), or CH2-(cyclohex-1,4-diyl)-CH2, etc.; Z is (CH2)2 or CH:CH; X is -Q-Ar-Q- or -Q-L-Q-; Q is a bond, alkyl, or O-alkyl, etc.; Ar is (un)substituted Ph or 5-6-membered aromatic heterocyclic ring; L is a bond or (cyclo)alkyl], useful for the treatment of M3 muscarinic receptor antagonists (no biol. data). For instance, naphthalele-1,4-imine derivative II was prepared via amidation of 1,2-benzenediacetic acid by cyclohexylamine derivative III with a yield of 18% (example 1).

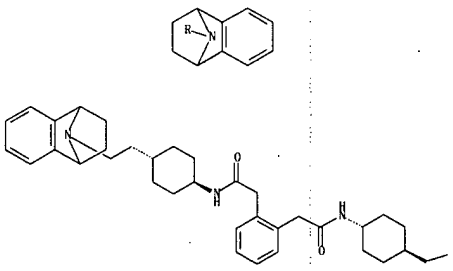
IT 781665-82-5P 781665-85-8P 781665-86-9P
781665-87-0P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of naphthalele-1,4-imine derivs., useful as M3 muscarinic acetylcholine receptor antagonists)

RN 781665-82-5 CAPLUS
CN 1,2-Benzenediacetamide, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



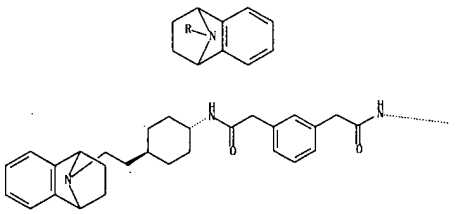
PAGE 1-B

RN 781665-85-8 CAPLUS
CN 1,3-Benzenediacetamide, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

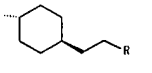
Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



RN 781665-86-9 CAPLUS
CN Urea, N,N''-[1,3-phenylenebis(methylene)]bis[N'-[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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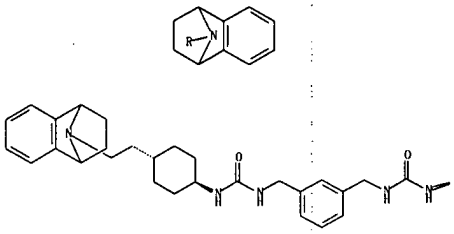
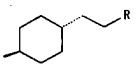


PAGE 1-B



RN 781665-87-0 CAPLUS
CN Urea, N,N''-[1,4-phenylenebis(methylene)]bis[N'-[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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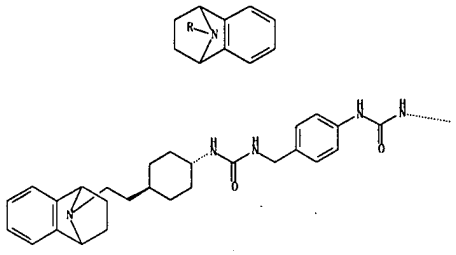

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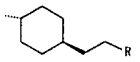


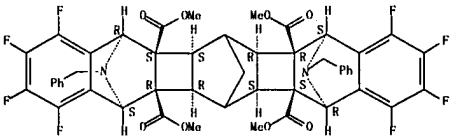
L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:630190 CAPLUS
DOCUMENT NUMBER: 136:53655
TITLE: Isoindole cycloadditions. Part III: the synthesis of "windscreen wiper" and other N-bridged cavity systems
AUTHOR(S): Warrener, Ronald N.; Malpass, John R.; Butler, Douglas N.; Sun, Guangxing
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Structural Chemistry (2001), 12(3/4), 291-304
CODEN: STCHES; ISSN: 1040-0400
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:53655

ABSTRACT:
The thermal addition of N-carbobenzyloxyisoindole, generated by the reaction of 3,6-di(2-pyridyl)-s-tetrazine with N-benzyloxycarbonyl-7-azabenzonorbornadiene, onto di-Me tricyclo[4.2.1.02,5]nona-3,7-diene-3,4-dicarboxylate (I) occurred site selectively at the cyclobutene π-bond to form a stereoisomeric mixture of 1:1-adducts, in which the bent-frame isomer was dominant (ratio 5: 1). In contrast, N-benzyl-4,5,6,7-tetrafluoroisoindole reacted with I only under high-pressure conditions (14 kbar, RT, 4 days) to afford 1:1-adducts at the cyclobutene site, in which the extended-frame isomer was dominant and the accompanying bent-frame product reverted to starting materials soon after isolation. These same stereoselectivities were used to prepare a "windscreen wiper" compound, having two mobile benzyl substituents attached to a rigid scaffold, by the reaction of N-benzyltetrafluoroisoindole with tetra-Me tetracyclo[4.4.1.0.2,5.07,10]undeca-3,8-diene-3,4,7,8-tetracarboxylate. A cavity bis-(cyclobutene-1,2-diester) was treated with N-benzyltetrafluoroisoindole twice over to produce a cavity structure with two O- and two N-benzyl bridges on the inner face, whereas the narrower cavity bis-alkene stopped at the 1:1-addition stage. The dynamics of the Z-group in the dual adducts are discussed briefly and key adducts and cavity systems have been structurally evaluated by X-ray crystallog., VT NMR, and mol. modeling.

IT 208117-32-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of N-bridged cavity systems from isoindoles)
RN 208117-32-2 CAPLUS
CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b-tetracarboxylic acid, 1,2,3,4,8,9,10,11-octafluoro-5,5b,6,6a,7,12,12b,13,13a,14-decahydro-15,17-bis(phenylmethyl)-, tetramethyl ester, (5R,5aS,5bS,6aR,6bR,7S,12R,12aS,12bS,13aR,13bR,14S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 382629-93-8P 382629-94-9P 382629-95-0P
382629-96-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of N-bridged cavity systems from isoindoles)
RN 382629-93-8 CAPLUS

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl 15,17-bis(phenylmethyl) ester, (5α,5aα,5bβ,6α,6a.beta.,6bα,7α,12α,12aα,12bβ,13α,13aβ,13bα,14α)- (9CI) (CA INDEX NAME)

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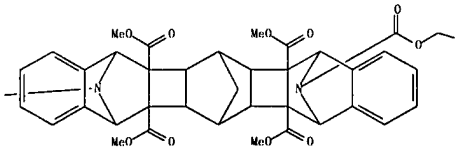

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RN 382629-94-9 CAPLUS
CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl 15,17-bis(phenylmethyl) ester, (5α,5aα,5bβ,6α,6a.beta.,6bα,7β,12β,12aα,12bβ,13α,13aβ,13bα,14α)- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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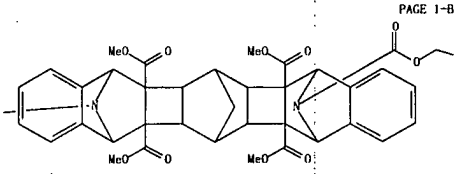

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~Ph

RN 382629-95-0 CAPLUS
CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,5bα,6β,6a,alpha.,6bβ,7α,12α,12aβ,12bα,13β,13aα,13bβ,14α)- (9CI) (CA INDEX NAME)

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L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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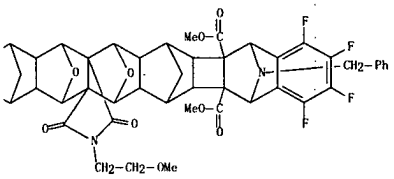
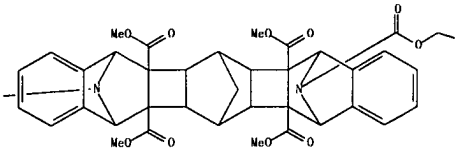


REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



PAGE 1-C

~Ph

RN 382629-96-1 CAPLUS
CN 7,18:8,17-Diepoxy-7a,17a-(methaniminomethano)-6,19:9,16-dimethanobisnaphtho[2',3':3,4]cyclobuta[1,2-b:1',2'-k]naphthacene-5,20:10,15-diimine-5a,9b,15a,19b-tetracarboxylic acid, 1,2,3,4,11,12,13,14-octafluoro-5,5b,6,6a,7,8,8a,9,9a,10,15,15b,16,16a,17,18,18a,19,19a,20-eicosahydro-25-(2-methoxyethyl)-24,26-dioxo-21,29-bis(phenylmethyl)-, tetramethyl ester, (5α,5aβ,5bα,6.beta.,6aβ,7α,7aβ,8α,8aβ,9β,9aα,9bβ,10α,15α,15aβ,15bα,16β,16aβ,17α,17a.beta.,18α,18aβ,19β,19aα,19bβ,20α)- (9CI) (CA INDEX NAME)

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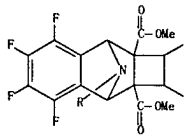
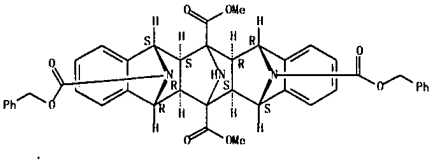


L4 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:126710 CAPLUS
DOCUMENT NUMBER: 134:326487
TITLE: Neighbouring group participation in N-methoxymethyl 7-azanorbornanes 1: the synthesis of N,N'-methano-bridged diazasesquinorbornanes, N3-[3]polynorbornanes and CN3-[4]polynorbornanes
AUTHOR(S): Warrener, Ronald N.; Margetic, Davor; Butler, Douglas N.; Sun, Guangxing
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Synlett (2001), (2), 202-205
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:326487
ABSTRACT:
A new tandem route to N,N'-methano-bridged diazasesquinorbornanes is reported in which 7-azabenzonorbornadienes are reacted with ester-activated N-(methoxymethyl)aziridinocyclobutanes to form adducts which immediately undergo N,N'-methano-bridge formation by nucleophilic attack of the nitrogen lone pair of one N-bridge onto the methoxymethyl group attached to the adjacent N-bridge. Alternative routes to N,N'-methano-bridged structures of this type are discussed.

IT 336611-53-1P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of methanodiazasesquinorbornanes and polynorbornanes)
RN 336611-53-1 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,12α,12aβ,13aα,13aβ,14α)- (9CI) (CA INDEX NAME)

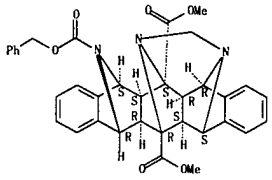
Relative stereochemistry.



IT 336611-52-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of methanodiazasesquinorbornanes and polynorbornanes)
RN 336611-52-0 CAPLUS
CN 10,15-Imino-5,9,16-metheno-5H,7H-benz[f]isoindolo[2',1':3,4]pyrimido[6,1-a]isoindole-9,15b,18-tricarboxylic acid, 9a,10,15,15a,16,16a-hexahydro-, 9,15b-dimethyl 18-(phenylmethyl) ester, (5R,9S,9aS,10S,15R,15aR,15bR,16S,16aS,17R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:126198 CAPLUS
DOCUMENT NUMBER: 134:280655
TITLE: Syn-facial hetero-bridged [n]polynorbornanes: a new class of polarofacial framework molecules composed of fused 7-oxa- and 7-azanorbornanes
AUTHOR(S): Warrener, Ronald N.; Margetic, Davor; Foley, Patrick J.; Butler, Douglas N.; Winling, Alain; Beales, Kerry A.; Russell, Richard A.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Tetrahedron (2001), 57(3), 571-582
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:280655

ABSTRACT:
New oxygen-bridged norbornane-fused cyclobutene epoxides and bis-(cyclobutene epoxides) are described and shown to react stereoselectively with 7-azanorbornenes to produce syn-facial N,O-bridged polynorbornanes and stereorandomly with 7-oxanorbornenes to produce O,O-bridged polynorbornanes as mixts. of syn-facial and anti-facial products. Polarofacial systems containing up to six syn-facial norbornane bridges are described, while systems with seven co-facial oxygen atoms have been prepared by incorporating terminal epoxide rings to O5-[5]polynorbornanes. Ester-substituted 1,3,4-oxadiazoles are shown to be useful reagents for coupling 7-oxanorbornanes and produce predominantly syn-facial O-bridged polarofacial systems together with their anti-facial isomers.

IT 233609-79-5P 332841-07-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(syn-facial hetero-bridged [n]polynorbornanes composed of fused 7-oxa- and 7-azanorbornanes)

RN 233609-79-5 CAPLUS
CN 6,17:7,16:8,15-Triepoxyheptacene-5,18:9,14-diimine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, 6,8,15,17-tetramethyl 19,23-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,14α,14aβ,15α,15aβ,16α,16aβ,17.alpha.,17aβ,18α)- (9CI) (CA INDEX NAME)

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L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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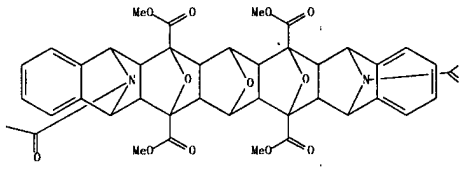

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RN 332841-07-3 CAPLUS
CN 6,19:7,18:8,17:9,16-Tetraepoxy-7a,17a-(methaniminomethano)octacene-5,20:10,15-diimine-6,9,16,19,21,29-hexacarboxylic acid, 5,5a,6,6a,7,8,8a,9,9a,10,15,15a,16,16a,17,18,18a,19,19a,20-eicosahydro-25-(2-methoxyethyl)-24,26-dioxo-, 6,9,16,19-tetramethyl 21,29-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,9aβ,10α,15α,15aβ,16α,16aβ,17α,17aβ,18α,18aβ,19α,19a.beta.,20α)- (9CI) (CA INDEX NAME)

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L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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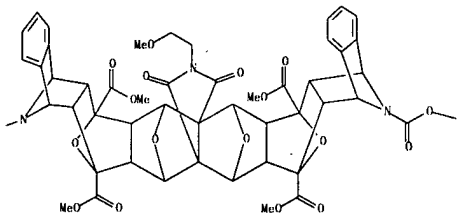

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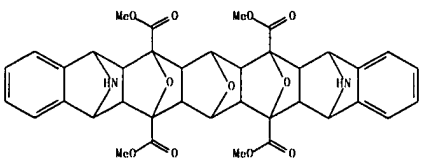
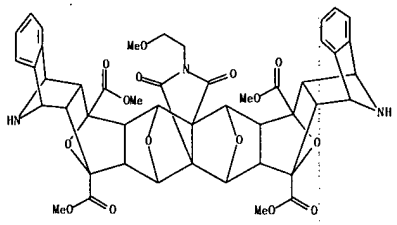
IT 332841-05-1P 332841-09-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(syn-facial hetero-bridged [n]polynorbornanes composed of fused 7-oxa- and 7-azanorbornanes)

RN 332841-05-1 CAPLUS
CN 6,17:7,16:8,15-Triepoxyheptacene-5,18:9,14-diimine-6,8,15,17-tetracarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, tetramethyl ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,14α,14aβ,15α,15aβ,16α,16aβ,17α,17aβ,18α)- (9CI) (CA INDEX NAME)



RN 332841-09-5 CAPLUS

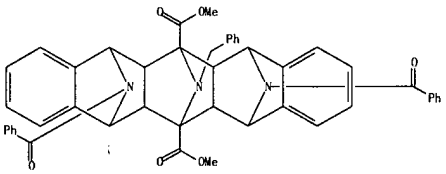
L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CN 6,19:7,18:8,17:9,16-Tetraepoxy-7a,17a-(methaniminomethano)octacene-5,20:10,15-diimine-6,9,16,19-tetracarboxylic acid, 5,5a,6,6a,7,8,8a,9,9a,10,15,15a,16,16a,17,18,18a,19,19a,20-eicosahydro-25-(2-methoxyethyl)-24,26-dioxo-, tetramethyl ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,9aβ,10α,15α,15aβ,16α,16aβ,17.alpha.,17aβ,18α,18aβ,19α,19aβ,20α)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

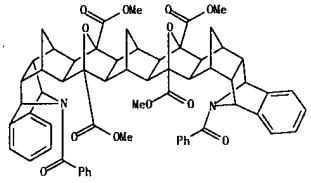
L4 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:47311 CAPLUS
DOCUMENT NUMBER: 134:280669
TITLE: Inside and outside N-bridged cavity systems: evidence for syn- and anti-atropisomers in scaffolds containing two N-benzoyl-7-azanorbornane units
AUTHOR(S): Warrener, R. N.; Sun, G.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, Queensland, 4702, Australia
SOURCE: Tetrahedron Letters (2001), 42(3), 465-468
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
Alkene and aziridine reagents containing N-benzoyl-7-azanorbornane components have been prepared and used to construct [n]polynorbornanes in a block building protocol. The presence of syn and anti atropisomers involving the restricted rotation of the N-COPh bridge was established by 1H NMR spectroscopy in an NNN-[3]polynorbornane (outside bridges) whereas the anti conformer dominated in a cavity NCOCOCN-[7]isopolynorbornane (inside bridges, X-ray confirmation) prepared by a dual 1,3-dipolar addition of an acute-angled norbornene with a hexacyclic bis-epoxide.

IT 332402-04-7P 332402-07-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and syn- and anti-atropisomers in polyazanorbornanes containing two N-benzoyl-7-azanorbornane units)
RN 332402-04-7 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13-dicarboxylic acid, 15,17-dibenzoyl-5,5a,6a,7,12,12a,13a,14-octahydro-16-(phenylmethyl)-, dimethyl ester (9CI) (CA INDEX NAME)



RN 332402-07-0 CAPLUS
CN 7,20:9,18-Diepoxy-6,21:8,19:10,17-trimethanononacene-5,22:11,16-diimine-7,9,18,20-tetracarboxylic acid, 23,29-dibenzoyl-5,5a,6,6a,7a,8,8a,9a,10,10a,11,16,16a,17,17a,18a,19,19a,20a,21,21a,22-docosahydro-, tetramethyl ester, (5α,5aβ,6β,6aα,7.beta.,7a.alpha.,8β,8aα,9β,9aα,10β,10aβ,11.alpha.,16α,16aβ,17β,17aα,18β,18aα,19β,19aα,20β,20aα,21β,21aβ,22α)- (9CI) (CA INDEX NAME)

L4 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:651372 CAPLUS
DOCUMENT NUMBER: 133:343790
TITLE: Uranium hexakisamido complexes
AUTHOR(S): Meyer, Karsten; Mindiola, Daniel J.; Baker, Thomas A.; Davis, William M.; Cummins, Christopher C.
CORPORATE SOURCE: Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139-4307, USA
SOURCE: Angewandte Chemie, International Edition (2000), 39(17), 3063-3066
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:343790
ABSTRACT:
The hexakisamidouranium(V) anion [U(dbabh)]- (1, Hdbabh = 2,3:5,6-dibenzo-7-azabicyclo[2.2.1]hepta-2,5-diene) and its homoleptic one-electron oxidation uranium(VI) product [U(dbabh)6] (2) were prepared and isolated. Oxidation of 1 is observed in an electrochem. redox couple, or chemical in air or with an oxidizing agent such as silver triflate. Complex 2 can be chemical reduced to anion 1. The crystal structures of [PPh4][1] and 2 were determined by x-ray crystallog. The six amido nitrogen atoms in both species form a near-perfect octahedron around the uranium.

IT 303962-98-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
RN 303962-98-3 CAPLUS
CN Phosphonium, tetraphenyl-, (OC-6-11)-hexakis(9,10-dihydroanthracen-9,10-imin-11-yl)uranate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 303962-96-1
CMF C84 H60 N6 U
CCI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 18198-39-5
CMF C24 H20 P

IT 303962-97-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 303962-97-2 CAPLUS
CN Ethanaminium, N,N,N-triethyl-, (OC-6-11)-hexakis(9,10-dihydroanthracen-9,10-imin-11-yl)uranate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 303962-96-1
CMF C84 H60 N6 U
CCI CCS

L4 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 66-40-0
CMF C8 H20 N

IT 303962-95-0P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, low-temperature X-band ESR, and oxidation to uranium(VI) hexakisamido derivative)
RN 303962-95-0 CAPLUS
CN Uranate(1-), hexakis(anthracen-9,10-iminato)-, (OC-6-11)-, lithium, compd. with tetrahydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 303962-94-9
CMF C84 H60 N6 U . Li
CCI CCS

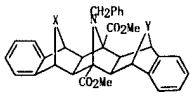
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 109-99-9
CMF C4 H8 O

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:142717 CAPLUS
DOCUMENT NUMBER: 132:278781
TITLE: In-line proximity effects in extended 7-azanorbornanes. 1. A new concept for modifying effector group separation based on the control of N-invertomer geometry
AUTHOR(S): Butler, Douglas N.; Hammond, Malcom L. A.; Johnston, Martin R.; Sun, Guangxing; Malpass, John R.; Fawcett, John; Warrener, Ronald N.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Organic Letters (2000), 2(6), 721-724
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GRAPHIC IMAGE:



I

ABSTRACT:
Control of N-substituent geometry in fused 7-azanorbornane systems is based on the dominance of one proximate bridge (sentinel X) over the other (sentinel Y) relative to the N-bridge (e.g., I; X,Y = CH2, spirocyclopropyl, C:CMe2, NCO2CH2Ph, O); the N-inversion equilibrium can effectively be displaced in favor of a single invertomer. This study has used a combination of synthesis, crystallog., and mol. modeling to establish stereostructures.

IT 263411-75-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and stereostructures of N-bridged [3]poly norbornanes)
RN 263411-75-2 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(phenylmethyl)-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7.alpha.,12α,12aβ,13α,13aβ,14α)- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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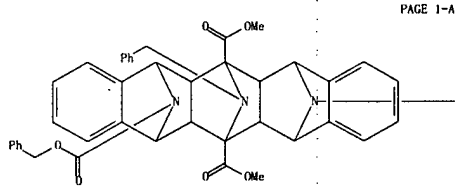


PAGE 1-B

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:321286 CAPLUS
DOCUMENT NUMBER: 131:116165
TITLE: Molecular topology: the synthesis of a new class of rigid arc-shaped spacer molecules based on syn-facially fused norbornanes and 7-heteronorbornanes in which heterobridges are used to govern backbone curvature
AUTHOR(S): Warrener, Ronald N.; Margetic, Davor; Sun, Guanxing; Amarasekara, Ananda S.; Foley, Patrick; Butler, Douglas N.; Russell, Richard A.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Tetrahedron Letters (1999), 40(21), 4111-4114
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

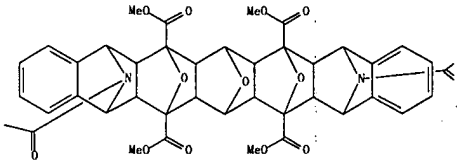
ABSTRACT:
The reaction of norbornadienes and 7-heteronorbornadienes with 7-oxa (or carba or aza) norbornene-fused cyclobutene epoxides (or aziridines) gave hetero-bridged polynorbornane cycloadducts containing syn-facially arranged N,O (or C,N or C,O) bridges. New dual cyclobutene epoxides and dual cyclobutene aziridines are used to prepare multi-fused norbornanes having curved topol. in which the heteroatoms modify the curvature in a predictable way CXNXO; AM1 modeling of representative [9]polynorbornanes is presented.

IT 233609-79-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and mol. topol. of arc-shaped spacer mols. based on syn-facially fused norbornanes and heteronorbornanes in which heterobridges govern backbone curvature)
RN 233609-79-5 CAPLUS
CN 6,17:7,16:8,15-Tripoxyheptacene-5,18:9,14-diimine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, 6,8,15,17-tetramethyl 19,23-bis(phenylmethyl) ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,14α,14aβ,15α,15aβ,16α,16aβ,17.alpha.,17aβ,18α)- (9CI) (CA INDEX NAME)

PAGE 1-A

L4 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



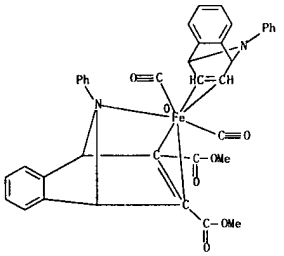
PAGE 1-C

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:551313 CAPLUS
DOCUMENT NUMBER: 129:245259
TITLE: Synthesis and crystal structure of (η2-olefin)(N-phenyl-2,3-dicarbomethoxy-7-azabenzonorbornadiene)Fe(CO)2 complex
AUTHOR(S): Sun, Chia-Hsing; Wu, Shiao-Yu; Liou, Lin-Shu; Wang, Ju-Chun
CORPORATE SOURCE: Department of Chemistry, Soochow University, Taipei, 111, Taiwan
SOURCE: Journal of the Chinese Chemical Society (Taipei) (1998), 45(4), 563-567
CODEN: JCCTAC; ISSN: 0009-4536
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 129:245259
ABSTRACT:
The title compds. (olefin = di-Me fumarate, di-Me maleate, maleic anhydride, N-Ph maleimide, N-phenyl-7-azabenzonorbornadiene, Et acrylate) 2a-f were obtained from photochem. substitution of (N-phenyl-2,3-dicarbomethoxy-7-azabenzonorbornadiene)Fe(CO)3 I with the corresponding alkenes as stable solids in moderate (46-71%) yields. X-ray structure determination of 2c shows a distorted trigonal bipyramidal geometry with two cross Fe-coordinated olefins. 2A-f represent a new type of (η2-monoolefin)2(R3N)Fe(CO)2.

IT 212956-33-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (alkene)(azabenzonorbornadiene)iron complexes by photochem. substitution reaction or iron tricarbonyl complex with alkenes)
RN 212956-33-7 CAPLUS
CN Iron, dicarbonyl[(2,3-η)-1,4-dihydro-9-phenylnaphthalen-1,4-imine][rel-(2,3-η)-dimethyl (1R,4S)-1,4-dihydro-9-phenylnaphthalen-1,4-imine-2,3-dicarboxylate-κN9]-, stereoisomer (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:376545 CAPLUS
DOCUMENT NUMBER: 129:95424
TITLE: Building BLOCKs in synthesis. Part 4. A 1,3-dipolar cycloaddition route to 7-azanorbornanes. Application to the synthesis of syn-facial N-bridged polynorbornanes
AUTHOR(S): Butler, Douglas N.; Malpass, John R.; Margetic, Davor; Russell, Richard A.; Sun, Guang Xing; Warrener, Ronald N.
CORPORATE SOURCE: Center Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: Synlett (1998), (6), 588-589
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 129:95424
ABSTRACT:
Aziridinocyclobutenes react with electron-deficient or ring-strained alkenes to produce 7-azanorbornenes in a novel 1,3-dipolar cycloaddn. reaction suitable for BLOCK assembly protocols. Benzo-7-azanorbornadiene and 7-hetero-bridged analogs react stereoselectively to produce compds. with syn-facial orientation of their bridges.

IT 209674-68-0P 209674-70-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of N-bridged polynorbornanes by dipolar cycloaddn. via azanorbornanes)
RN 209674-68-0 CAPLUS
CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(phenylmethyl)-, 15,17-bis(1,1-dimethylethyl) 6,13-dimethyl ester, (5R,5aR,6R,6aS,7S,12R,12aR,13S,13aS,14S)-rel- (9CI) (CA INDEX NAME)

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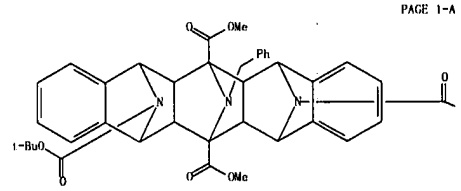

PAGE 1-B

RN 209674-70-4 CAPLUS

L4 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CN 7,16-Methanoheptacene-5,18:6,17:8,15:9,14-tetrimine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-20,22-bis(phenylmethyl)-, 19,23-bis(1,1-dimethylethyl) 6,8,15,17-tetramethyl ester, (5α,5aβ,6α,6aβ,7α,7aβ,8α,8aβ,9α,14α,14aβ,15α,15aβ,16aα,16αβ,16aβ,17α,17aβ,18α)- (9CI) (CA INDEX NAME)

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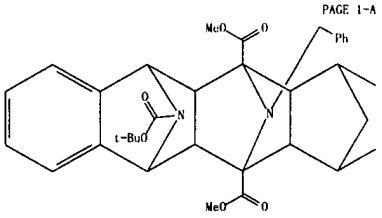
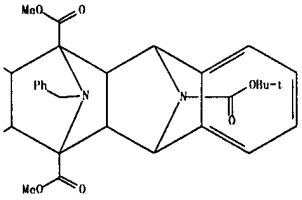


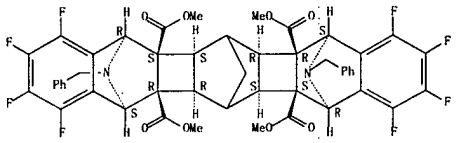
PAGE 1-B



L4 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:308815 CAPLUS
DOCUMENT NUMBER: 129:27875
TITLE: Novel 'windscreen wiper' cavity structures formed by the cycloaddition of N-substituted isoindoles onto molrac bis-alkenes
AUTHOR(S): Malpass, John R.; Sun, Guangxing; Fawcett, John; Warrener, Ronald N.
CORPORATE SOURCE: Centre Mol. Architecture, Central Queensland Univ., Rockhampton, 4702, Australia
SOURCE: Tetrahedron Letters (1998), 39(19), 3083-3086
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 129:27875
ABSTRACT:
A strong N-substituent effect is observed in the reaction of isoindole with cyclobutene-1,2-diesters: N-alkoxycarbonyl derivs. react to form adducts with bent-frame stereostructures; N-alkylisoindoles produce both extended-frame (stable) and bent-frame (unstable) stereoisomers, but require high-pressure conditions (10-15 kbar); N-acyl isoindoles fail to react. The first 'windscreen wiper' N-bridged cavity compound was prepared, the structure of which was confirmed by x-ray anal.

IT 208117-32-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of windscreen wiper cavity structures by cycloaddn. of N-substituted isoindoles onto molrac bis-alkenes)
RN 208117-32-2 CAPLUS
CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b-tetracarboxylic acid, 1,2,3,4,8,9,10,11-octafluoro-5,5b,6,6a,7,12,12b,13,13a,14-decahydro-15,17-bis(phenylmethyl)-, tetramethyl ester, (5R,5aS,5bS,6aR,6bR,7S,12R,12aS,12bS,13aR,13bR,14S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

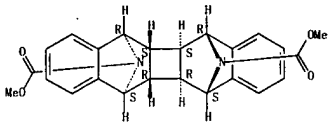


REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:496282 CAPLUS
DOCUMENT NUMBER: 123:227683
TITLE: [2+2] Dimerization of norbornadiene and its derivatives in the presence of nickel complexes and zinc metal
AUTHOR(S): Huang, Daw-Jen; Cheng, Chien-Hong
CORPORATE SOURCE: Department of Chemistry, National Tsing Hua University, Hsinchu, 300, Taiwan
SOURCE: Journal of Organometallic Chemistry (1995), 490(1-2), C1-C7
CODEN: JORCAI; ISSN: 0022-328X
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 123:227683
ABSTRACT:
Norbornadiene undergoes [2+2] reaction in THF in the presence of NiX2 and Zn powder to give an exo-trans-exo dimer and an exo-trans-exo-trans-exo trimer. In these products, the norbornadiene mols. are linked to each other by forming cyclobutane rings with all cyclobutane carbons occupying exo positions relative to the bridging carbons on the two norbornadiene fragments. Polymerization of norbornadiene occurs if the catalyst NiX2 is replaced by Ni(PPh3)2Cl2; 1,4-dihydro-1,4-epoxynaphthalene, 5,8-dimethoxy-1,4-dihydro-1,4-epoxynaphthalene, 5-methoxy-1,4-dihydro-1,4-epoxynaphthalene and Me 1,4-dihydro-1,4-iminonaphthalene-9-carboxylate also dimerize to give exo-trans-exo products in excellent yields in toluene in the presence of Ni(PPh3)2Cl2 and Zn powder. For the dimerization products of 5-methoxy-1,4-dihydro-1,4-epoxynaphthalene, cis and trans isomers with respect to the orientation of methoxy groups in about 1 : 1 ratio were observed. Under similar reaction conditions for the dimerization of norbornadiene, norbornene undergoes reductive dimerization to afford a product which consists of two norbornyl groups. The structure of this product is also exo-trans-exo. NiBr2, Zn powder and norbornadiene were stirred at 50° for 72 h to give both the dimer and trimer.

IT 168297-14-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(dimerization of norbornadiene and its derivs. in the presence of nickel complexes and zinc metal)
RN 168297-14-1 CAPLUS
CN Dibenzo[b,h]biphenylene-5,12:6,11-diimine-13,14-dicarboxylic acid, 5,5a,5b,6,11,11a,11b,12-octahydro-, dimethyl ester, (5α,5aβ,5bα,6β,11β,11aα,11bβ,12α)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1988:492840 CAPLUS
DOCUMENT NUMBER: 109:92840
TITLE: Tetrahalobenzenes as diaryne equivalents in polycyclic arene synthesis
AUTHOR(S): Hart, Harold; Lai, Chung Yin; Nwokogu, Godson Chukuemeka; Shamouilian, Shamouil
CORPORATE SOURCE: Dep. Chem., Michigan State Univ., East Lansing, MI, 48823, USA
SOURCE: Tetrahedron (1987), 43(22), 5203-24
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:92840
ABSTRACT:
1,2,4,5-Tetrabromobenzenes and analogous naphthalenes react with one or two equivalent of BuLi and various dienes (furans, pyrroles, cyclopentadienes, fulvenes) to form mono- or bis-cycloadducts. Highly substituted arenes can be obtained by removing the O or N bridges from the furan or pyrrole adducts. By choice of conditions, two identical or two different rings can be fused to the di-aryne equivalent. Improved short synthesis of permethylnaphthalene, -anthracene and -naphthacene are described. A new triphenylene synthesis is presented.

IT 115711-02-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 115711-02-9 CAPLUS
CN Pentacene-5,14:7,12-diimine-15,16-diamine, 5,7,12,14-tetrahydro-N,N,N',N',1,4,5,6,7,8,11,12,13,14-tetradecamethyl- (9CI) (CA INDEX NAME)

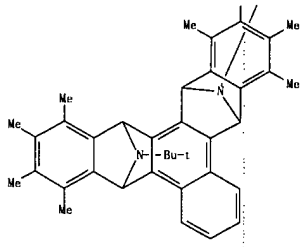
L4 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1988:94433 CAPLUS
DOCUMENT NUMBER: 108:94433
TITLE: anti-5,16:10,15-Bis(tert-butylimino)-1,2,3,4,11,12,13,14-octamethyl-5,10,15,16-tetrahydrobenzo[h]pentaphene
AUTHOR(S): Preut, H.; Hildebrand, T.; Kreher, R. P.
CORPORATE SOURCE: Fachbereich Chem., Univ. Dortmund, Dortmund, D-4600/50, Fed. Rep. Ger.
SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (1988), C44(1), 203-5
CODEN: ACSCEE; ISSN: 0108-2701
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
The title compound is triclinic, space group P.hivin.1, with a 11.701(9), b 11.796(15), c 15.538(8) Å, α 69.12(7), β 62.27(7), and γ 67.15(7)°; dc = 1.133 for Z = 2. The final R = 0.062 for 3466 reflections. Atomic coordinates are given. The constitution and configuration of the hitherto unknown Diels-Alder adduct of 2,5-di-tert-butyl-2,5-dihydrobenzo[e]pyrrolo[3,4-g]isoindole with 3,4,5,6-tetramethyl-1,2-dehydrobenzene was elucidated via the crystal structure anal. The tert-Bu groups of the annelated cyclic compound are in anti position. The perpendicular to the plane of the naphthalene ring and the direction through the position of the N and the central C of the tert-Bu groups are nearly parallel and therefore there is ample space at the N atoms for the free electron pairs.

IT 111558-06-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
RN 111558-06-6 CAPLUS
CN Benzo[h]pentaphene-5,16:10,15-diimine, 17,18-bis(1,1-dimethylethyl)-5,10,15,16-tetrahydro-1,2,3,4,11,12,13,14-octamethyl-, (5α,10β,15β,16α)- (9CI) (CA INDEX NAME)

PAGE 1-A

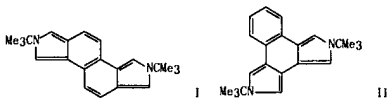
L4 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A



L4 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

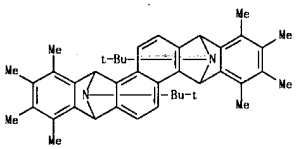
ACCESSION NUMBER: 1988:55823 CAPLUS
DOCUMENT NUMBER: 108:55823
TITLE: Structure and reactivity of isoannulated heterocyclic systems with 4nπ- and (4n + 2)-π-electrons. 13. Annulated isoindole with 18 π-electrons
AUTHOR(S): Kreher, Richard P.; Hildebrand, Thomas
CORPORATE SOURCE: Univ. Dortmund, Dortmund, D-4600, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1987), 99(12), 1325-7
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 108:55823
GRAPHIC IMAGE:



I II

ABSTRACT:
Hetarenes I and II were prepared in 65% and 51% yields, resp. in several convention synthetic steps from 2,6-dimethylnaphthalene and 1,2,3,4-tetramethylnaphthalene, resp.

IT 111558-05-5P 111558-06-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectra of)
RN 111558-05-5 CAPLUS
CN Dibenzo[b,k]chrysene-5,16:8,13-diimine, 17,18-bis(1,1-dimethylethyl)-5,8,13,16-tetrahydro-1,2,3,4,9,10,11,12-octamethyl-, (5α,8β,13β,16α)- (9CI) (CA INDEX NAME)

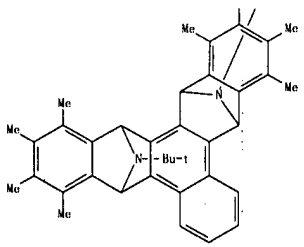


RN 111558-06-6 CAPLUS
CN Benzo[h]pentaphene-5,16:10,15-diimine, 17,18-bis(1,1-dimethylethyl)-5,10,15,16-tetrahydro-1,2,3,4,11,12,13,14-octamethyl-, (5α,10β,15β,16α)- (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A



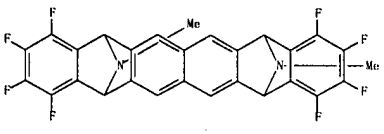
L4 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1985:471031 CAPLUS
DOCUMENT NUMBER: 103:71031
TITLE: Twin benzannulation of naphthalene via 1,3-, 1,6-, and 2,6-naphthodiyne synthetic equivalents. New syntheses of triphenylene, benz[a]anthracene, and naphthacene
AUTHOR(S): Gribble, Gordon W.; Perni, Robert B.; Oman, Kay D.
CORPORATE SOURCE: Dep. Chem., Dartmouth Coll., Hanover, NH, 03755, USA
SOURCE: Journal of Organic Chemistry (1985), 50(16), 2934-9
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 103:71031
GRAPHIC IMAGE:

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

ABSTRACT:
New syntheses of triphenylene (I, R = H), benz[a]anthracene (II), naphthacene (III, R1 = H), and the tetramethylated derivs. I (R = Me) and III (R1 = Me), are described that feature, as the key step, the formal Diels-Alder cycloaddn. between a naphthodiyne equivalent, e.g., dibromoditosylate IV (Ts = p-tolylsulfonyl) and a furan. Subsequent deoxygenation affords the arene in 16-28% overall yield from dibromo ditosylates. The latter are prepared in two steps from com. available 2,3- or 2,7-dihydroxynaphthalene, and, with PhLi, serve as synthetic equivs. of naphthodiynes. The x-ray structure of the anti isomer of V is discussed in some detail.

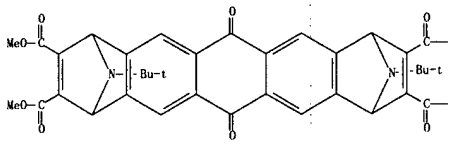
IT 96965-77-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 96965-77-4 CAPLUS
CN Hexacene-5,16:8,13-diimine, 1,2,3,4,9,10,11,12-octafluoro-5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:630302 CAPLUS
DOCUMENT NUMBER: 101:230302
TITLE: Structure and reactivity of isoannulated heterocyclic systems with 4nπ and (4n + 2)π electrons. Part 10. Oligocyclic hetarenes with quinoid structure; synthesis by sequential cyclic condensation
AUTHOR(S): Kreher, Richard P.; Pfister, Juergen
CORPORATE SOURCE: Univ. Dortmund, Dortmund, D-4600/50, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1984), 96(11), 906-7
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
GRAPHIC IMAGE: For diagram(s), see printed CA Issue.
ABSTRACT:
Oligocyclic hetarenes with quinoid structures were prepared Pyrroledicarboxaldehydes I (R = CMe3, CH2Ph) cyclocondensed with 1,4-cyclohexanedione to give 45-50% primary condensation products II which condensed with I to give 90-95% isoindoles III or with arenedicarboxaldehydes IV (X = H2, CH:CHCH:CH, o-CH:CHC6H4CH:CH) to give 40-60% V. I (R = CMe3) and 1,4-naphthalenediol gave 75% VI. III, V, and VI reacted with MeO2CC.tplbond.CCO2Me to give the corresponding cycloadducts.

IT 92763-87-6P 92843-01-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 92763-87-6 CAPLUS
CN Pentacene-1,4:8,11-diimine-2,3,9,10-tetracarboxylic acid, 15,16-bis(1,1-dimethylethyl)-1,4,6,8,11,13-hexahydro-6,13-dioxo-, tetramethyl ester, (1α,4α,8β,11β)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

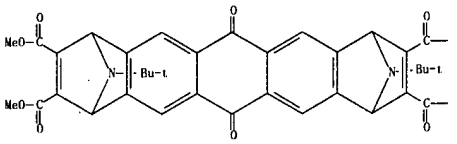
—OMe

—OMe

RN 92843-01-1 CAPLUS
CN Pentacene-1,4:8,11-diimine-2,3,9,10-tetracarboxylic acid,

L4 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
15,16-bis(1,1-dimethylethyl)-1,4,6,8,11,13-hexahydro-6,13-dioxo-, tetramethyl ester, (1α,4α,8α,11α)- (9CI) (CA INDEX NAME)

PAGE 1-A

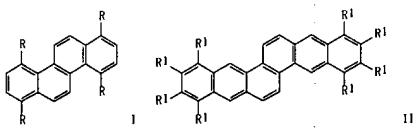


PAGE 1-B

—OMe

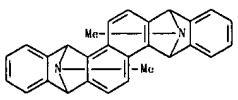
—OMe

L4 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:197743 CAPLUS
DOCUMENT NUMBER: 98:197743
TITLE: Twin annulation of naphthalene via a 1,5-naphthodiyne synthon. New syntheses of chrysene and dibenzo[b,k]chrysene
AUTHOR(S): LeHoullier, Craig S.; Gribble, Gordon W.
CORPORATE SOURCE: Dep. Chem., Dartmouth Coll., Hanover, NH, 03755, USA
SOURCE: Journal of Organic Chemistry (1983), 48(10), 1682-5
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 98:197743
GRAPHIC IMAGE:



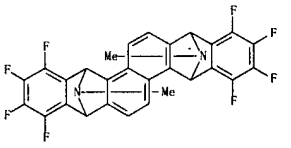
ABSTRACT:
New, efficient syntheses of chrysenes I (R = H, Me) and dibenzo[b,k]chrysenes II (R1 = H, F) featured the formal cycloaddn. between 1,5-naphthodiyne (III) and a heterocyclic diene such as furan, pyrroles, and isoindoles as the key step. Subsequent manipulation afforded 26-49% I, or II overall from 2,6-dibromo-1,5-dihydroxynaphthalene. The latter was easily converted to ditosylate, which, with PhLi, served as a synthon for III.

IT 85337-36-6P 85337-37-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidative deamination of)
RN 85337-36-6 CAPLUS
CN Dibenzo[b,k]chrysene-5,16:8,13-diimine, 5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)



RN 85337-37-7 CAPLUS
CN Dibenzo[b,k]chrysene-5,16:8,13-diimine, 1,2,3,4,9,10,11,12-octafluoro-5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)

L4 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



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L6            18 SEA FILE=CAPLUS ABB=ON  PLU=ON  ("COOPER ANTHONY W J"/AU OR
                 "COOPER ANTHONY WILLIAM JAMES"/AU)
L7            35 SEA FILE=CAPLUS ABB=ON  PLU=ON  ("LAINE DRAMANE"/AU OR "LAINE
                 DRAMANE I"/AU OR "LAINE DRAMANE IBRAHIM"/AU)
L8            18 SEA FILE=CAPLUS ABB=ON  PLU=ON  ("MCCLELAND BRENT"/AU OR
                 "MCCLELAND BRENT W"/AU)
L9            63 SEA FILE=CAPLUS ABB=ON  PLU=ON  ("PALOVICH MICHAEL"/AU OR
                 "PALOVICH MICHAEL R"/AU OR "PALOVICH MICHAEL ROBERT"/AU)
L10          120 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 OR L6 OR L7 OR L8 OR L9
L11           35 SEA FILE=CAPLUS ABB=ON  PLU=ON  L10 AND MUSCARINIC


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L11 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:1170495 CAPLUS
TI Discovery of novel 8-azoniabicyclo[3.2.1]octane carbamates as muscarinic acetylcholine receptor antagonists
AU Laine, Dramane I.; Xie, Haibo; Buffet, Noemie; Foley, James J.; Buckley, Peter; Webb, Edward F.; Widdowson, Katherine L.; Palovich, Michael R.; Belmonte, Kristen E.
CS GlaxoSmithkline, King of Prussia, PA, 19406, USA
SO Bioorganic & Medicinal Chemistry Letters (2007), 17(22), 6066-6069
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Ltd.
DT Journal
LA English
AB In the course of our research program to develop novel muscarinic receptor antagonists for the treatment of COPD, new tropane carbamate derivs. were identified as potent anti-muscarinic agents. The synthesis, structure-activity relationships and pharmacol. evaluation that led to the identification of compound 5o, are described.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:200864 CAPLUS
DN 146:274232
TI Preparation of azoniabicyclo[2.2.1]heptane bromide derivatives as muscarinic acetylcholine receptor antagonists
IN Laine, Dramane I.; Palovich, Michael R.; McCleland, Brent W.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 33pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007022351	A2	20070222	WO 2006-US32138	20060817
WO 2007022351	A3	20071004		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
PRAI US 2005-709301P	P	20050818		

OS MARPAT 146:274232
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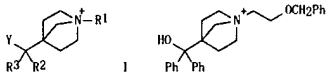

I II

AB Title compds. represented by the formula I•X- [wherein Y = OH or CN; R1 = (cyano)alkyl, haloalkyl, alkylaryl, etc.; R2, R3 = independently (un)substituted (hetero)aryl; X- = physiol. acceptable anion] were prepared as muscarinic acetylcholine receptor antagonists. For example, condensation of Et 1-azabicyclo[2.2.1]heptane-4-carboxylate with phenyllithium (54%), and followed by N-alkylation with 2-bromoethyl phenylmethyl ether (36%), gave II•Br-. The biol. assays for inhibition of muscarinic acetylcholine receptor and formulation-administration were described. Thus, I and their pharmaceutical compns. are useful for the treatment of muscarinic acetylcholine receptor mediated diseases, such as chronic obstructive lung disease (no data).

L11 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:174409 CAPLUS
DN 146:252103
TI Preparation of amino acid derivatives as M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Fu, Wei; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 66pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007018514	A1	20070215	WO 2005-US26877	20050728
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI WO 2005-US26877		20050728		

OS MARPAT 146:252103
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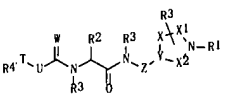


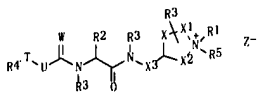
I

AB Amino acid derivs. I [X is C, O; Y is C, N; X1, X2, Z are (CH2)0-2; R1 is H, (un)substituted alkyl, Ph, thienyl, furyl, etc.; R2 is methylene, ethylene, or propylene substituted by Ph, thienyl, furyl, pyridyl, naphthyl, quinolinyl, indolyl, benzothienyl, benzofuranyl, etc.; R3 is H, (un)substituted alkyl, cycloalkyl, Ph, etc.; R4 is (un)substituted alkyl, cycloalkyl, Ph, etc.; U is NR3, O, or a bond; W is O, S, or NH; T is (un)substituted Ph, thienyl, furyl, pyridyl, naphthyl, quinolinyl, indolyl, benzothienyl, or benzofuranyl] were prepared as muscarinic acetylcholine receptor antagonists. Thus, Et 4-[[[[(1S)-1-[(4-hydroxyphenyl)methyl]-2-[[1-[(4-hydroxyphenyl)methyl]-3-pyrrolidinyl]amino]-2-oxoethyl]amino]carbonyl]amino]benzoate was prepared by a multistep procedure in solid phase starting from protected tyrosine.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:174402 CAPLUS
DN 146:252102
TI Preparation of amino acid derivatives as M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Fu, Wei; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Wang, Yonghui
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 100pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007018508	A1	20070215	WO 2005-US26756	20050728
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI WO 2005-US26756		20050728		

OS MARPAT 146:252102
GI



I

AB Amino acid derivs. I [X is C, O; X1, X2, X3 are (CH2)0-2; R1 is H, (un)substituted alkyl, Ph, thienyl, furyl, etc.; R2 is methylene, ethylene, or propylene substituted by Ph, thienyl, furyl, pyridyl, naphthyl, quinolinyl, indolyl, benzothienyl, benzofuranyl, etc.; R3 is H, (un)substituted alkyl, cycloalkyl, Ph, etc.; R4, R5 are (un)substituted alkyl, cycloalkyl, Ph, etc.; U is NR3, O, or a bond; W is O, S, or NH; T is (un)substituted Ph, thienyl, furyl, pyridyl, naphthyl, quinolinyl, indolyl, benzothienyl, or benzofuranyl] were prepared as muscarinic acetylcholine receptor antagonists. Thus, N-[[[4-(ethoxycarbonyl)phenyl]amino]carbonyl]-N-[(3S)-1-[(4-hydroxyphenyl)methyl]-1-methyl-3-pyrrolidiniumyl]-L-tyrosinamide trifluoroacetate was prepared by a multistep procedure in solid phase starting from protected tyrosine.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:146107 CAPLUS
DN 146:229203
TI Preparation of azoniabicyclooctanes as M3 muscarinic acetylcholine receptor antagonists.
IN Busch-Petersen, Jakob; Laine, Dramane Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 42pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007016639	A2	20070208	WO 2006-US30153	20060802
WO 2007016639	A3	20070705		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2005-704579P P 20050802
OS MARPAT 146:229203
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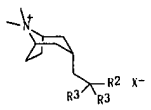


I

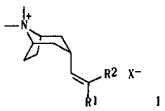
AB Title compds. [I; R1, R2 = (substituted) Ph, thienyl, pyridyl, PhCH2, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; R3 = H, OH; X = physiol. acceptable anion], were prepared for treatment of chronic obstructive pulmonary disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, 2-[(3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl]-1,1-bis(3-methyl-2-thienyl)ethanol (preparation given) was treated with MeBr in tert-Bu Me ether to give 61% (3-endo)-3-[2-hydroxy-2,2-bis(3-methyl-2-thienyl)ethyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide.

L11 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:144089 CAPLUS
DN 146:229182
TI Preparation of 3-(arylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.3.1]octanes as M3 muscarinic acetylcholine receptor antagonists.
IN Busch-Petersen, Jakob; Laine, Dramane Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 35pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007016650	A2	20070208	WO 2006-US30218	20060802
WO 2007016650	A3	20070531		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRAI US 2005-704578P P 20050802
OS MARPAT 146:229182
GI



I

AB Title compds. [I; R1, R2 = (substituted) Ph, thienyl, pyridyl, PhCH2, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; X = pharmaceutically acceptable counterion], were prepared for treatment of COPD, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, (endo)-3-[2,2-bis(3-hydroxyphenyl)ethenyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide was prepared from tri-Me phosphonoacetate, tropinone, MeI, and 3-methoxyphenylmagnesium bromide.

L11 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:972157 CAPLUS
DN 145:328769
TI Fluorescent styryl dyes FM1-43 and FM2-10 are muscarinic receptor antagonists: intravital visualization of receptor occupancy
AU Mazzone, Stuart B.; Mori, Nanako; Burman, Miriam; Palovich, Michael; Belmonte, Kristen E.; Canning, Brendan J.
CS The Howard Florey Institute, University of Melbourne, Victoria, 3010, Australia
SO Journal of Physiology (Oxford, United Kingdom) (2006), 575(1), 23-35
CODEN: JPHYA7; ISSN: 0022-3751
PB Blackwell Publishing Ltd.
DT Journal
LA English
AB The fluorescent styryl dyes FM1-43 and FM2-10 have been used to visualize the endocytic and exocytic processes involved in neurotransmission in a variety of central and peripheral nerve preps. Their utility is limited to some extent by a poorly understood vesicular-independent labeling of cells and tissues. We show here that one likely cause of this troublesome background labeling is that FM1-43 and FM2-10 are selective and competitive antagonists at both cloned and endogenously expressed muscarinic acetylcholine receptors. In radioligand binding studies, FM1-43 and FM2-10 bound with moderate affinity (23-220 nM) to membranes of Chinese hamster ovary (CHO) cells expressing cloned human muscarinic receptors (M1-M5). In functional studies in vitro, FM1-43 and FM2-10 inhibited elec. field stimulation (EFS) and acetylcholine-induced cholinergic contractions of guinea-pig tracheal strips (IC50: FM1-43, 0.4±0.1; FM2-10, 1.6±0.1 μM; concentration of antagonist producing a 2-fold leftward shift in the acetylcholine concentration-response curve (Kb): FM1-43, 0.3±0.1; FM2-10, 15.8±10.1 μM). Neither compound inhibited EFS-evoked, non-adrenergic non-cholinergic nerve-mediated relaxations or contractions of the airways, or contractions mediated by histamine H1 receptor or tachykinin NK2 receptor activation. Incubating freshly excised tracheal whole-mount preps. with 5 μM FM1-43 resulted in intense fluorescence labeling of the smooth muscle that was reduced by up to 90% in the presence of selective M2 and M3 receptor antagonists. The potency of the FM dyes as muscarinic receptor antagonists is within the concentration range used to study vesicular cycling at nerve terminals. Given that muscarinic receptors play a key role in the regulation of neurotransmitter release from a variety of neurons, the anticholinergic properties of FM dyes may have important implications when studying vesicular events in the nervous system. In addition, these dyes may provide a noval tool for visualizing muscarinic receptor occupancy in living tissue or cell preps.
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:608671 CAPLUS
DN 145:83655
TI Preparation of fused heteroaromatic quaternary ammonium salt amino acid derivatives as novel muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Davis, Roderick S.; Fu, Wei; Jin, Jian; Laine, Dramane I.; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006065755	A2	20060622	WO 2005-US44951	20051213
WO 2006065755	A3	20061012		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2004-635664P P 20041213
OS MARPAT 145:83655
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to amino acid heteroarom. derivs. I [Y is S, O or NR4 (R4 is H, alkyl, allyl); X, Z are N or CR5 (R5 is H, alkyl, alkenyl, halo, NR4, OR4, CN, NO2, CF3), provided that N ≤ 2 for X and ≤ 3 for Z; n is 0-3; A- is halo, CF3CO2-, mesylate, tosylate, etc.; R1, R2 are (un)substituted alkyl, cycloalkyl, Ph, etc.; T is (un)substituted thiophene, furan, thiazole, isothiazole, pyrrole, imidazole, pyrazole, or Ph; R3 is acyl, carboxylic ester, sulfonyloxy, sulfonylamino, carbamoyl, etc.] for use in treating muscarinic acetylcholine receptor-mediated diseases. Thus, imidazothiazolium tyrosinamide derivative II was prepared by a multistep sequence involving reaction of 2-methylimidazo[2,1-b][1,3]thiazole-6-methanamine (preparation given) on DADHB resin with Fmoc-Tyr(Bu-t)-OH (Fmoc = fluorenylmethoxycarbonyl).

L11 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:605213 CAPLUS
DN 145:76661
TI Muscarinic acetylcholine receptor antagonists useful in the treatment of asthma, pulmonary diseases and other diseases of respiratory tract
IN Busch-Petersen, Jakob; Davis, Roderick S.; Fu, Wei; Jin, Jian; Laine, Dramane I.; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006065788	A2	20060622	WO 2005-US45012	20051213
WO 2006065788	A3	20060817		

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2004-635703P P 20041213
OS MARPAT 145:76661
AB The invention discloses muscarinic acetylcholine receptor antagonists R3TNHC(O)NHCH(CH2R1)C(O)N(R4)-(CH2)nCYC [CYC = Q1, Q2; Y = S, O, NR4; X = Z, CR5 (with provisions); Z = N, CR5 (with provisions); n = 0-3; R1 = (un)branchec C1-8 alkyl, C3-8 cycloalkyl, etc.; T= thiophene, furan, thiazole, etc.; R3 = COR6, COOR6, OSO2R6, etc.; R4 = H, C1-3 alkyl, allyl; R5= H, C1-3 alkyl, halo, etc.; R6 = (un)substituted (un)branched C1-8 alkyl, C3-12 cycloalkyl, Ph, etc.] useful in treatment of respiratory tract diseases, including asthma, allergic rhinitis, pulmonary fibrosis and others.

L11 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:578252 CAPLUS
DN 145:55947
TI Muscarinic antagonists for the treatment of respiratory diseases
IN Laine, Dramane Ibrahim; Palovich, Michael R.
PA Smithkline Beecham Corporation, USA
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006062883	A2	20060615	WO 2005-US43875	20051205
WO 2006062883	A3	20070329		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2004-633669P P 20041206
OS MARPAT 145:55947
AB This invention relates to derivs. of 8-azoniabicyclo[3.2.1]octane, pharmaceutical compns. in combination with one or more other therapeutic ingredients, such as β2-adrenoreceptor agonists, antihistamines, allergy inhibitors, and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. A claimed combination medication includes (3-endo)-3-(2,2-di-thienylethenyl)-8,8,dimethyl-8-azoniabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

L11 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:558688 CAPLUS
DN 145:40272
TI Muscarinic antagonists in combination with β2-adrenoreceptor agonists and/or anti-inflammatories for the treatment of respiratory diseases
IN Laine, Dramane Ibrahim; Palovich, Michael R.
PA Smithkline Beecham Corporation, USA
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006062931	A2	20060615	WO 2005-US44033	20051205
WO 2006062931	A3	20070419		

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRAI US 2004-633618P P 20041206
AB This invention relates to a combination of (3-endo)-3-(2,2-di-thienylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide, with one or more other therapeutic ingredients selected from β2-adrenoreceptor agonists and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. A claimed combination medication includes (3-endo)-3-(2,2-di-thienylethenyl)-8,8,dimethyl-8-azoniabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

L11 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:494266 CAPLUS
DN 145:8190
TI Preparation of N-[(piperazinylmethyl)biphenyl]benzamide derivatives as M3 muscarinic acetylcholine receptor antagonists
IN Budzik, Brian; Jin, Jian; Laine, Dramane; Mccleland, Brent; Palovich, Michael; Rivero, Ralph; Wang, Yonghui; Xie, Haibo; Zhu, Chongjie; Cooper, Anthony
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 106 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006055553	A2	20060526	WO 2005-US41346	20051115
WO 2006055553	A3	20060908		

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2004-627986P P 20041115
OS MARPAT 145:8190
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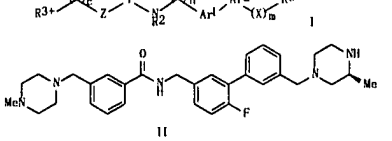

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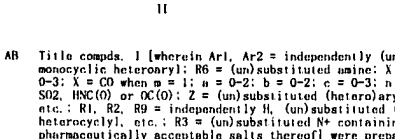


II

AB Title compds. I [wherein Ar1, Ar2 = independently (un)substituted Ph or monocyclic heteroaryl; R6 = (un)substituted amine; X = C(R1)p when m = 0-3; X = CO when m = 1; n = 0-2; b = 0-2; c = 0-3; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); Z = (un)substituted (hetero)aryl, alkenyl, alkyl, etc.; R1, R2, R9 = independently H, (un)substituted (cyclo)alkyl, heterocyclyl, etc.; R3 = (un)substituted N+ containing cyclyl; or pharmaceutically acceptable salts thereof] were prepared as M3 muscarinic acetylcholine receptor antagonists. For instance, solid-phase synthesis of II·4CF3CO2H was realized in an overall yield of 52%, via (1) amination of DMHB (2,6-dimethoxy-4-polystyrenebenzyloxybenzaldehyde) resin-bound 3-bromo-4-fluorobenzylamine with 3-formylbenzoic acid; (2) reductive amination with 1-methylpiperazine; (3) Pd-catalyzed coupling with 3-formylphenylboronic acid; (4) reductive amination with (S)-2-methylpiperazine; (5) methylation

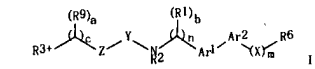
L11 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
with MeI; and (6) cleavage from the resin with TFA. Biol. assay for inhibition of receptor activation by calcium mobilization and pharmaceutical formulations were described. I and pharmaceutical compns. are potentially useful for the treatment of muscarinic acetylcholine receptor-mediated diseases, such as respiratory tract disorders.

L11 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
pharmaceutically acceptable counter ions, I-, Br-, Cl-, F-, CF3CO2-, mesylate and tosylate; or pharmaceutically acceptable salts thereof] were prepd. as M3 muscarinic acetylcholine receptor antagonists. For instance, solid-phase synthesis of II·3CF3CO2H was realized in an overall yield of 38%, via (1) amination of DMHB resin (2,6-dimethoxy-4-polystyrenebenzyloxybenzaldehyde) bound 3-bromo-4-fluorobenzylamine with 3-formylbenzoic acid; (2) reductive amination with 1-methylpiperazine; (3) Pd-catalyzed coupling with 3-formylphenylboronic acid; (4) methylation with MeI; (5) reductive amination with (S)-2-methylpiperazine and (6) cleavage from the resin with TFA. Biol. assay for inhibition of receptor activation by calcium mobilization and pharmaceutical formulations were described. I and pharmaceutical compns. are potentially useful for the treatment of muscarinic acetylcholine receptor-mediated diseases, such as respiratory tract disorders.

L11 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:494067 CAPLUS
DN 145:8188
TI Preparation of N-[(piperazinylmethyl)biphenyl] benzamides as m3 muscarinic acetylcholine receptor antagonists
IN Budzik, Brian W.; Jin, Jian; Laine, Dramane I.; Palovich, Michael R.; Rivero, Ralph A.; Wang, Yonghui; Xie, Haibo
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006055503	A2	20060526	WO 2005-US41230	20051115
	WO 2006055503	A3	20060803		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1827439	A2	20070905	EP 2005-851625	20051115
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
PRAI	US 2004-627822P	P	20041115		
	WO 2005-US41230	W	20051115		

OS MARPAT 145:8188
GI



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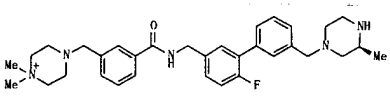


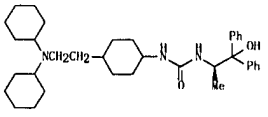
II

AB Title compds. I•U- [wherein Ar1, Ar2 = independently (un)substituted Ph or monocyclic heteroaryl; R6 = (un)substituted amine; X = C(R1)p when m = 0-3; X = CO when m = 1; a = 0-2; b = 0-2; c = 0-3; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); Z = (un)substituted (hetero)aryl, alkenyl, alkyl, etc.; R1, R2, R9 = independently H, (un)substituted (cyclo)alkyl, heterocyclyl, etc.; R3 = (un)substituted N+ containing cyclyl; U- =

L11 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:437585 CAPLUS
DN 144:467911
TI Preparation of diphenylalkyl cyclohexyl urea derivatives as muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Boehm, Jeffrey Charles; Li, Huijie; Taggart, John J.; Yan, Hongxing
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006050239	A2	20060511	WO 2005-US39209	20051027
	WO 2006050239	A3	20061012		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1824483	A2	20070829	EP 2005-824984	20051028
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
PRAI	US 2004-623558P	P	20041029		
	WO 2005-US39209	W	20051027		

OS MARPAT 144:467911
GI

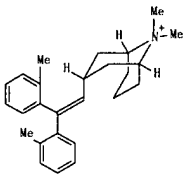


I

AB Muscarinic acetylcholine receptor antagonists are prepared E.g., I was prepared by a series of reactions starting with tert-Bu [4-(2-oxoethyl)cyclohexyl]carbamate and dicyclohexylamine. In vitro and iv vivo functional assays for muscarinic acetylcholine receptor inhibitory activity are given. Also pharmaceutical formulations are given.

L11 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:152777 CAPLUS
DN 144:226317
TI Preparation of azoniabicyclo[3.3.1]nonanes as muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Palovich, Michael; Laine, Dramane Ibrahim
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006017767	A2	20060216	WO 2005-US27957	20050805
	WO 2006017767	A3	20060526		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1781103	A2	20070509	EP 2005-783731	20050805
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
PRAI	US 2004-600213P	P	20040806		
	WO 2005-US27957	W	20050805		
OS	MARPAT 144:226317				
GI					

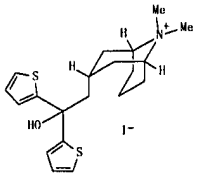


I

AB Muscarinic acetylcholine receptor antagonists and methods of using them are provided. E.g., I was prepared by quaternization of 3-[2,2-bis(2-methylphenyl)ethenyl]-9-methyl-9-azabicyclo[3.3.1]nonane (II) with MeI. II was prepared by reaction of 2-(9-methyl-9-azabicyclo[3.3.1]non-3-yl)-1,1-bis(2-methylphenyl)ethanol with HCl. Biol. examples include anal. of inhibition of receptor activation by Ca mobilization, muscarinic receptor radioligand binding assays, and evaluation of potency and duration of action in isolated guinea pig trachea.

L11 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:147697 CAPLUS
DN 144:226314
TI Preparation of azoniabicyclo[3.3.1]nonane derivatives as muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Davis, Roderick S.; Laine, Dramane Ibrahim; Neipp, Christopher E.; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006017768	A2	20060216	WO 2005-US27958	20050805
	WO 2006017768	A3	20060608		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1781104	A2	20070509	EP 2005-783735	20050805
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
PRAI	US 2004-600538P	P	20040805		
	WO 2005-US27958	W	20050805		
OS	CASREACT 144:226314; MARPAT 144:226314				
GI					

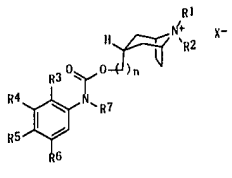


I

AB Muscarinic acetylcholine receptor antagonists and methods of using them are provided. E.g., I was prepared by quaternization of 2-[(3-endo)-9-methyl-9-azabicyclo[3.3.1]non-3-yl]-1,1-di-2-thienylethanol (II) with MeI. II was prepared from Et [(3-endo)-9-methyl-9-azabicyclo[3.3.1]non-3-yl]acetate and 2-thienyl]lithium. Biol. examples include anal. of inhibition of receptor activation by Ca mobilization, muscarinic receptor radioligand binding assays, and evaluation of potency and duration of action in isolated guinea pig trachea.

L11 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:29466 CAPLUS
DN 144:128867
TI Preparation of azoniabicyclo[3.2.1]octanes for use as muscarinic acetylcholine receptor antagonists in treating respiratory disease
IN Cooper, Anthony William James; Laine, Dramane I.; Palovich, Michael R.; Thomas, Sonia M.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006005057	A2	20060112	WO 2005-US23743	20050630
	WO 2006005057	A3	20060928		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1765339	A2	20070328	EP 2005-768142	20050630
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
PRAI	US 2004-584011P	P	20040630		
	WO 2005-US23743	W	20050630		
OS	MARPAT 144:128867				
GI					

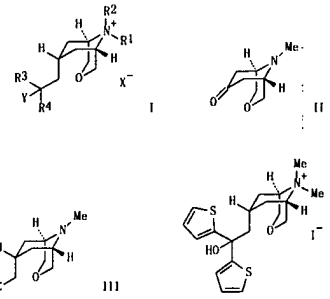


I

AB This invention relates to biaryl 8-azoniabicyclo[3.2.1]octane compds. I (Y= (unsubstituted) thiophene; R1 and R2 = a bond, H, and C1-4 alkyl; R3, R4, R5 and R6 = H, halogen, NO2, CN, C1-10-alkyl, C2-10 alkenyl, C1-10-alkoxy, etc.; R7 = H and C1-4 alkyl; X = a physiol. acceptable anion, such as chloride, bromide, and iodide; n = 0 or 1), pharmaceutical compns., and use thereof in treating muscarinic acetylcholine receptor mediated diseases of the respiratory tract. I can be prepared via the Curtius reaction of a suitable substituted 2-bromobenzoic acid with the suitably protected [3.2.1] bicyclic alc.; the resulting intermediate is coupled to a suitable boronic acid and the protecting group removed. No biol. data is given in the patent.

L11 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L11 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



I II III IV

AB The invention relates to a group of 3-oxa-9-azoniabicyclo[3.3.1]nonanes I, which are antagonists of muscarinic acetylcholine receptors (mAChRs). In compds. I, R1 and R2 are independently selected from H, C1-12 alkyl, C2-10 alkenyl, C3-6 cycloalkyl-C1-6 alkyl, aryl-C1-10 alkyl, hydroxy-C1-10 alkyl, cyano-C1-6 alkyl, halo-C1-10 alkyl, (trifluoromethyl)-C1-6 alkyl, C1-6 alkoxyalkyl, and methoxy-C1-6 alkoxy-C1-6 alkyl; R3 and R4 are independently selected from C1-6 alkyl, C5-6 cycloalkyl, C6-10 cycloalkylalkyl, 2-thienyl, (un)substituted aryl, (un)substituted C5-6 heteroaryl having N or O as the heteroatom, C5-6 heterocyclyl having N or O as the heteroatom, and C6-10 heterocyclylalkyl having N or O as the heteroatom; Y is OH or cyano; and X- is a physiol. acceptable anion associated with the pos. charge of the N atom, including chloride, bromide, iodide, hydroxide, sulfate, nitrate, phosphate, acetate, trifluoroacetate, fumarate, citrate, tartrate, oxalate, succinate, mandelate, methanesulfonate, p-toluenesulfonate, etc.; and the side chain indicated may have either endo or exo orientation, but is preferred with endo. The invention also relates to the preparation of I, pharmaceutical compns. comprising a compound I and a pharmaceutically acceptable carrier, as well as to the use of the compns. for the treatment of mAChR-mediated diseases of the respiratory tract. Horner-Emmons reaction of 9-methyl-3-oxa-9-azabicyclo[3.3.1]nonan-7-one (II) with di-Et (cyanomethyl)phosphonate and stereoselective hydrogenation gave endo-nitrile III, which underwent hydrolysis to the Et ester followed by addition of 2-thienyllithium and N-alkylation with Me iodide to give iodide IV. The compds. of the invention are antagonists of mAChRs (no data).

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1311319 CAPLUS
DN 144:51593
TI 3-Oxa-9-azoniabicyclo[3.3.1]nonanes as muscarinic acetylcholine receptor antagonists, their preparation, pharmaceutical compositions, and use in therapy
IN Busch-Petersen, Jakob; Neipp, Christopher E.; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

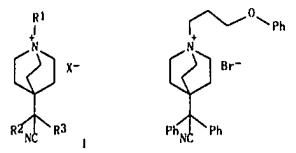
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005118594	A1	20051215	WO 2005-US18563	20050526
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1749012	A1	20070207	EP 2005-753818	20050526
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV				
	US 2007232599	A1	20071004	US 2006-568909	20061110
PRAI	US 2004-575329P	P	20040528		
	WO 2005-US18563	W	20050526		

OS CASREACT 144:51593; MARPAT 144:51593
GI

L11 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1259696 CAPLUS
DN 144:22816
TI Preparation of quinuclidine salts as muscarinic acetylcholine receptor antagonists for use against respiratory tract diseases
IN Laine, Dramane I.; McCleland, Brent W.; Neipp, Christopher E.; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005112644	A2	20051201	WO 2005-US16148	20050510
	WO 2005112644	A3	20060330		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1747219	A2	20070131	EP 2005-742935	20050510
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV				
	US 2007173646	A1	20070726	US 2006-568930	20061110
PRAI	US 2004-570581P	P	20040513		
	WO 2005-US16148	W	20050510		

OS CASREACT 144:22816; MARPAT 144:22816
GI



I II

AB Quinuclidinium salts (shown as I; variables defined below; e.g. 4-(cyanodiphenylmethyl)-1-[3-(phenyloxy)propyl]-1-azoniabicyclo[2.2.2]octane bromide (shown as II)) as muscarinic acetylcholine receptor antagonists (no data) and methods of using them are provided. Methods of preparation are claimed and prepns. and/or characterization data for 13 examples of I are included. For example, II was prepared in 79 % yield by quaternization with 3-bromopropyl Ph ether of 2-(1-azabicyclo[2.2.2]oct-4-yl)-2,2-diphenylacetonitrile, which was prepared in 60 % yield from (1-azabicyclo[2.2.2]oct-4-yl)diphenylmethanol (preparation described) and TMSCN in 1,2-dichloroethane in the presence of AlCl3. For I: R1 = a bond, H, C1-15 alkyl, halo-substituted C1-15 alkyl, aryl C1-15 alkyl, C1-15 alkylcycloalkyl, cycloalkyl, C2-15 alkenyl,

L11 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
hydroxy-substituted C1-15 alkyl, C1-15 alkylaryl, (CR7R7)qORa, (CR7R7)qNRaRa, (CR7R7)qNC(O)Ra, (CR7R7)qC(O)NRaRa, (CR7R7)qC(O)Ra, (CR7R7)qC(O)ORa, and (CR7R7)qOC(O)Ra; or R1 = phthalimidoalkyl, heterocyclylalkyl, heterocyclyloxyalkyl; and R2 and R3 = aryl, aryl C1-4 alkyl, C1-4 alkylaryl, heteroaryl, heteroaryl C1-4 alkyl, C1-4 alkylheteroaryl, heterocyclyl, C1-4 alkylheterocyclyl and heterocyclyl C1-4 alkyl; Ra = H, C1-15 alkyl, C1-15 alkoxy, aryl, aryl C1-15-alkyl, heteroaryl, heteroaryl C1-15 alkyl, heterocyclyl and heterocyclyl C1-15 alkyl; q is 0-15; n = 1-14; m = 1-15; p = 1-4; and X = a physiol. acceptable anion; addnl. details are given in the claims.

L11 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
heteroaryl, (un)substituted C1-4 alkyl-heteroaryl, (un)substituted heterocyclyl, and (un)substituted C1-4 alkyl-heterocyclyl; and X- is a physiol. acceptable anion, such as chloride, bromide, iodide, hydroxide, sulfate, nitrate, phosphate, acetate, trifluoroacetate, fumarate, citrate, tartrate, oxalate, succinate, mandelate, methanesulfonate, and p-toluenesulfonate. The invention also relates to the prepn. of I, pharmaceutical comps. comprising a compd. I and a pharmaceutically acceptable carrier, as well as to the use of the comps. for the treatment of muscarinic acetylcholine receptor-mediated diseases via nasal or oral inhalation. Substitution of 3-fluorobenzyl bromide with ethylene glycol followed by bromination gave 2-bromoethyl ether II, which underwent substitution with 1-azabicyclo[2.2.2]oct-4-yl(diphenyl)methanol (III) resulting in the formation of quinuclidinium bromide IV. The compds. of the invention inhibit muscarinic M3 receptors (no data).

L11 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1200309 CAPLUS
DN 143:460035
TI 4-[Hydroxy(diaryl)methyl]-1-azabicyclo[2.2.2]octanium bromides as muscarinic acetylcholine receptor antagonists, their preparation, pharmaceutical compositions, and use in therapy
IN Laine, Dramane I.; Palovich, Michael R.; McCleland, Brent W.; Neipp, Christopher E.; Thomas, Sonia M.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005104745	A2	20051110	WO 2005-US14386	20050427
	WO 2005104745	A3	20060803		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005237576	A1	20051110	AU 2005-237576	20050427
	CA 2564742	A1	20051110	CA 2005-2564742	20050427
	EP 1740177	A2	20070110	EP 2005-746609	20050427
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
	CN 1976701	A	20070606	CN 2005-80021536	20050427
	BR 2005010170	A	20071002	BR 2005-10170	20050427
	IN 2006DN05413	A	20070810	IN 2006-DN5413	20060919
	MX 2006PA12405	A	20070117	MX 2006-PA12405	20061026
	KR 2007015412	A	20070202	KR 2006-722276	20061026
	NO 2006005417	A	20061229	NO 2006-5417	20061124
	US 2007185155	A1	20070809	US 2007-568330	20070503
	US 2007249664	A1	20071025	US 2007-774867	20070709
PRAI	US 2004-565623P	P	20040427		
	WO 2005-US14386	W	20050427		
	US 2007-568330	A1	20070503		

OS CASREACT 143:460035; MARPAT 143:460035
GI

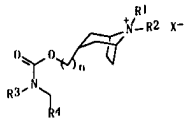
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to 4-[hydroxy(diaryl)methyl]-quinuclidinium bromides of formula I, which are muscarinic acetylcholine receptor antagonists. In compds. I, R1 is selected from C1-15 alkyl, halo-substituted C1-15 alkyl, C1-15 alkyl-cycloalkyl, cycloalkyl, C2-15 alkenyl, C1-15 alkyl-aryl, etc.; R2 and R3 are independently selected from (un)substituted aryl, (un)substituted C1-4 alkyl-aryl, (un)substituted

L11 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1154378 CAPLUS
DN 143:422258
TI Preparation of 8-azoniabicyclo[3.2.1]octane carbamates as muscarinic acetylcholine receptor antagonists.
IN Laine, Dramane I.; Palovich, Michael R.; Xie, Haibo; Buffet, Noemie
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005099706	A2	20051027	WO 2005-US11975	20050407
	WO 2005099706	A3	20060511		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1732923	A2	20061220	EP 2005-737620	20050407
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV				
	US 2007238751	A1	20071011	US 2006-599717	20061006
PRAI	US 2004-560155P	P	20040407		
	WO 2005-US11975	W	20050407		

OS MARPAT 143:422258
GI



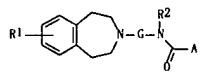
I

AB Title compds. [I; R1 = bond, H, alkyl; R2 = H, alkyl, haloalkyl, cyanoalkyl, alkenyl, cycloalkenyl, alkylcycloalkyl, cycloalkylalkyl, etc.; R3, R4 = (substituted) Ph, thienyl, furyl, cycloalkyl; n = 0-2; X = pharmaceutically acceptable counterion], were prepared for treatment of chronic obstructive pulmonary disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, (3-endo)-8-azabicyclo[3.2.1]oct-3-ylmethyl [(2-fluorophenyl)methyl]-2-thienylcarbamate trifluoroacetate (preparation given) was stirred with MeBr and NaHCO3 in CH2Cl2/Me3COMe for 16 h to give (3-endo)-3-[[[[[(2-fluorophenyl)methyl](2-thienyl)amino]carbonyl]oxy]methyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide.

L11 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1103585 CAPLUS
DN 143:386758
TI Preparation of benzazepines as muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramane I.; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005094834	A1	20051013	WO 2004-US8026	20040317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725240	A1	20061129	EP 2004-821845	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529512	T	20071025	JP 2007-503876	20040317
US 2007185090	A1	20070809	US 2006-598887	20060914
PRAI WO 2004-US8026	W	20040317		

OS CASREACT 143:386758; MARPAT 143:386758
GI



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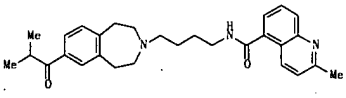


II

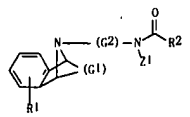
AB Title compds. I [R1 = (un)substituted alkanoyl, aroyl and aroylalkyl; G = alkyl, substituted cyclohexyl or alkylamide; R2 = H or alkyl; A = (un)substituted alkyl, X-AR, CH=CH-Ar, etc.; X = bond, O, S, etc.; Ar = (un)substituted Ph, aromatic heterocycle or bicyclic heterocycle] and their

L11 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
pharmaceutically acceptable salts, are prepd. and disclosed as antagonists of muscarinic acetylcholine receptors. Thus, e.g., II was prepd. by cyclization of 3-aminobenzoic acid with sodium 3-nitrobenzene sulfonate and subsequent amidation/oxidn. sequence using 4-amino-1-butanol followed by coupling with 2-methyl-1-(2,3,4,5-tetrahydro-1H-3H-benzazepin-7-yl)-propan-1-one (prepn. given). The inhibitory activity of I was evaluated using receptor-activated calcium mobilization assay (no data). I as antagonist of muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compns. comprising I are disclosed.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1103428 CAPLUS
DN 143:386757
TI Preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramane I.; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005094251	A2	20051013	WO 2004-US8025	20040317
WO 2005094251	A3	20060330		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725238	A2	20061129	EP 2004-821844	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529511	T	20071025	JP 2007-503875	20040317
US 2007185148	A1	20070809	US 2006-598885	20060914
PRAI WO 2004-US8025	W	20040317		

OS MARPAT 143:386757
GI



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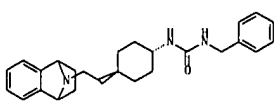

II

L11 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AB Title compds. I [Z1 = H or alkyl; R1 = H, halo, C(O)aryl, etc.; G1 = CH2CH2 or CH=CH; G2 = alkyl or substituted cyclohexyl; R2 = XAr, XArlYAr2 or NR3Z(Ar)n; X = bond, NR3 or alkyl; R3 = H (un)substituted alkyl or alkylaryl; Z = (un)substituted alkyl or alkyl-Y2 or Z and R3 or Z and Ar may form 4-7 membered ring; Ar = (un)substituted aryl, aromatic heterocycle, heterobicyclic ring system, etc.; Ar1 and Ar2 independently = (un)substituted Ph or aromatic heterocycle; Y = bond, NHCO, CONH, etc.; Y2 = NR3, O, S, etc.; n = 0-3] and their pharmaceutically acceptable salts, are prepared and disclosed as antagonists of M3 muscarinic acetylcholine receptors. Thus, e.g., II was prepared by coupling of 1,2,3,4-tetrahydro-1,4-epiazano-naphthalene with [4-(2-oxo-ethyl)-cyclohexyl]-carbamic acid tert-Bu ester followed by deprotection and subsequent benzylation using benzyl isocyanate. The inhibitory activity of I was evaluated using receptor-activated calcium mobilization assay (no data). I as antagonist of M3 muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compns. comprising I are disclosed.

L11 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1021624 CAPLUS
DN 143:326392
TI Preparation of biaryl amines as M3 muscarinic acetylcholine receptor antagonists
IN Budzik, Brian W.; Cooper, Anthony W. J.; Corbett, David Francis; Jin, Jian; Laine, Dramane I.; Wang, Yonghui; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Xie, Haibo; Zhu, Chongjie
PA Glaxo Group Limited, UK; et al.
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005087236	A1	20050922	WO 2005-US8302	20050311
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725236	A1	20061129	EP 2005-725459	20050311
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV				
JP 2007528420	T	20071011	JP 2007-503080	20050311
PRAI US 2004-552106P	P	20040311		
WO 2005-US8302	W	20050311		

OS MARPAT 143:326392
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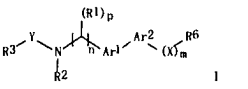

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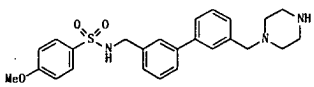


II

AB Title compds. I [wherein Ar1, Ar2 = (un)substituted Ph or monocyclic heteroaryl; R6 = (un)substituted amine; X = C(R1)p when m = 0-3; X = CO when m = 1; p = 0-2; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); R1, R2 = H, (un)substituted alkyl, etc.; R3 = (un)substituted (hetero)aryl, etc., or pharmaceutically acceptable salts thereof] were prepared as M3 muscarinic acetylcholine receptor antagonists. For instance, solid-phase synthesis of II·2CF3COOH was realized in an overall

L11 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
yield of 46% on 2,6-dimethoxy-4-polystyrenebenzyloxybenzaldehyde (DMHB resin), via (1) reductive amination with 3-bromobenzylamine hydrochloride; (2) N-sulfonation with 4-methoxybenzenesulfonyl chloride; (3) Pd-catalyzed coupling with 3-formylphenylboronic acid; (4) reductive amination with N-Bocpiperazine; and (5) cleavage from the resin with TFA. No biol. data were given. I and pharmaceutical compns. are potentially useful for the treatment of muscarinic acetylcholine receptor-mediated diseases, such as respiratory tract disorders.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:673020 CAPLUS
DN 143:172762
TI Preparation of 8-azabicyclo[3.2.1]octane derivatives as muscarinic acetylcholine receptor antagonists
IN Laine, Dramane I.; Palovich, Michael R.; Preston, Alexander G.; Cooper, Anthony William James
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005067537	A2	20050728	WO 2005-US1333	20050113
WO 2005067537	A3	20060518		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005204935	A1	20050728	AU 2005-204935	20050113
CA 2552880	A1	20050728	CA 2005-2552880	20050113
EP 1711183	A2	20061018	EP 2005-711495	20050113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
CN 1929844	A	20070314	CN 2005-80008126	20050113
BR 2005006777	A	20070522	BR 2005-6777	20050113
JP 2007518740	T	20070712	JP 2006-549649	20050113
IN 2006DN03964	A	20070427	IN 2006-DN3964	20060710
MX 2006PA07958	A	20061107	MX 2006-PA7958	20060712
NO 2006003636	A	20061004	NO 2006-3636	20060811
PRAI US 2004-536092P	P	20040113		
WO 2005-US1333	W	20050113		

OS MARPAT 143:172762
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

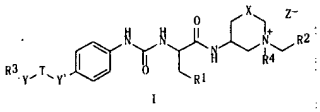
AB The author prepared several azabicyclo[3.2.1]octane derivs. I [A = (CH2)n, n = 0, 1; R1, R2 = bond, H, Me; R3 = H, C1-C4 alkyl; R4, R5 = H, halo, C1-C4alkyl, C2-C4alkenyl, (CR92)qORa, (CR92)qNCORa; R6, R7, R8 = H, halo, cyano, C1-C4alkyl, C2-C4alkenyl, C1-C4alkoxy, (CR92)qORa, (CR92)qNCORa; R6R7 or R7R8 = 5-, 6-membered ring; Ra = H, C1-C4alkyl; R9 = H, C1-C4alkyl; q = 0-4; X = Cl, Br, iodo, OH, SO3, NO2, etc.] to be used as muscarinic acetylcholine receptor antagonists, specifically for treating asthma, chronic obstructive lung disease, chronic bronchitis, chronic respiratory obstruction, pulmonary fibrosis, pulmonary emphysema, and allergic rhinitis via inhalation of a pharmaceutical composition of the compound To illustrate the synthesis, 8-(phenylmethyl)-8-azabicyclo[3.2.1]octan-3-one reacted with methyltriphenylphosphonium bromide to give the 3-methylidene compound which was treated with disiamylborane followed by removal of the benzyl group and protection with Boc to give ester II. 3'-Trifluoromethyl-2-biphenylylcarboxylic acid in

L11 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CHCl3 was treated with diphenylphosphoryl azide in CHCl3 and the soln. was reacted with II and p-TsOH to give desired carbamate III.

L11 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:540458 CAPLUS
DN 143:78480
TI Preparation of amino acid derivatives as novel M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Wang, Yonghui
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005055941	A2	20050623	WO 2004-US40668	20041203
	WO 2005055941	A3	20060216		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004296208	A1	20050623	AU 2004-296208	20041203
	CA 2549273	A1	20050623	CA 2004-2549273	20041203
	EP 1694327	A2	20060830	EP 2004-813056	20041203
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	CN 1913895	A	20070214	CN 2004-80041273	20041203
	BR 2004017343	A	20070313	BR 2004-17343	20041203
	JP 2007513182	T	20070524	JP 2006-542826	20041203
	MX 2006PA06256	A	20060823	MX 2006-PA6256	20060602
	IN 2006DN03161	A	20070824	IN 2006-DN3161	20060602
	NO 2006003032	A	20060830	NO 2006-3032	20060629
	US 2007179180	A1	20070802	US 2007-581229	20070315
PRAI	US 2003-526766P	P	20031203		
	WO 2004-US40668	W	20041203		

OS MARPAT 143:78480
GI



I

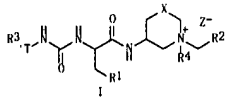
AB Amino acid derivs. I [X is null or CH2; one of Y and Y' is N or O and the other is null; T is SO2 or CO; R1, R2 are independently (un)substituted alkyl, cycloalkyl or phenyl; R3 is (un)substituted Ph, thiophenyl,

L11 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
furanyl, pyridinyl, etc.; R4 is alkyl, cycloalkyl or cycloalkylalkyl; Z- is a pharmaceutically-acceptable ion, e.g., halide, trifluoroacetate, mesylate or tosylate] were prepd. as muscarinic acetylcholine receptor antagonists. Thus, N-[(3S)-1-[(3,4-dimethoxyphenyl)methyl]-1-methyl-3-piperidiniumyl]-N-[[[4-[[(2,5-dimethyl-3-thienyl)sulfonyl]oxy]phenyl]amino]carbonyl]-L-tyrosinamide trifluoroacetate was prepd. by a multistep procedure in solid phase.

L11 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:540457 CAPLUS
DN 143:78479
TI Preparation of amino acid derivatives as novel M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Wang, Yonghui
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005055940	A2	20050623	WO 2004-US40667	20041203
	WO 2005055940	A3	20050915		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004296207	A1	20050623	AU 2004-296207	20041203
	CA 2549272	A1	20050623	CA 2004-2549272	20041203
	EP 1708702	A2	20061011	EP 2004-813055	20041203
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR, IS				
	BR 2004017215	A	20070221	BR 2004-17215	20041203
	JP 2007513181	T	20070524	JP 2006-542825	20041203
	IN 2006DN03111	A	20070824	IN 2006-DN3111	20060531
	MX 2006PA06372	A	20060823	MX 2006-PA6372	20060605
	NO 2006002992	A	20060627	NO 2006-2992	20060627
	US 2007179184	A1	20070802	US 2007-581230	20070317
PRAI	US 2003-526824P	P	20031203		
	WO 2004-US40667	W	20041203		

OS CASREACT 143:78479; MARPAT 143:78479
GI



I

AB Amino acid derivs. I [X is null or CH2; R3-T is (un)substituted Ph, thiophenyl, furanyl, pyridinyl, etc.; R1, R2 are independently (un)substituted alkyl, cycloalkyl or phenyl; R4 is alkyl, cycloalkyl or cycloalkylalkyl; Z- is a pharmaceutically-acceptable ion, e.g., halide, trifluoroacetate, mesylate or tosylate] were prepared as muscarinic acetylcholine receptor antagonists. Thus, N-[(3S)-1-[(3-hydroxyphenyl)methyl]-1-methyl-3-piperidinium]-N-[[[5-(methoxycarbonyl)-2-furanyl]amino]carbonyl]-L-tyrosinamide trifluoroacetate was prepared by a multistep procedure in solid phase.

L11 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L11 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:451115 CAPLUS
DN 143:7605
TI A preparation of azabicyclo[3.2.1]octane derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
IN Wan, Zehong; Yan, Hongxing; Palovich, Michael R.; Laine, Dramane I.; Lee, Dennis; Stavenger, Robert A.; Goodman, Krista B.; Hilfiker, Mark A.; Cui, Haifeng; Viet, Andrew W.; Marino, Joseph P.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005046586	A2	20050526	WO 2004-US36663	20041104
	WO 2005046586	A3	20050728		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1682142	A2	20060726	EP 2004-810294	20041104
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR, IS				
	JP 2007510731	T	20070426	JP 2006-539633	20041104
	US 2007129396	A1	20070607	US 2006-577834	20060501
	US 2007270456	A1	20071122	US 2007-774885	20070709
PRAI	US 2003-517243P	P	20031104		
	WO 2004-US36663	W	20041104		
	US 2006-577834	A1	20060501		

OS CASREACT 143:7605; MARPAT 143:7605
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a preparation of azabicyclo[3.2.1]octane derivs. of formula I•X- [wherein: X- is an anion; R1 is alkyl, alkenyl, alkylcycloalkyl, or alkyl-OMe, etc.; R2 is (cyclo)alkyl, heterocycloalkyl, or cycloalkylalkyl, etc.], useful as M3 muscarinic acetylcholine receptor antagonists (no biol. data). For instance, quaternary azabicyclo[3.2.1]octane derivative II•Br- was prepared via quaternization of N-methylazabicyclo[3.2.1]octane derivative [II by cyclopropylmethyl bromide with a yield of 51%.

L11 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:369284 CAPLUS
DN 142:423894
TI 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists, their preparation, and their therapeutic use
IN Busch-Petersen, Jakob; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005037280	A1	20050428	WO 2004-US33638	20041012
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004281724	A1	20050428	AU 2004-281724	20041012
	CA 2542657	A1	20050428	CA 2004-2542657	20041012
	EP 1677795	A1	20060712	EP 2004-794886	20041012
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
	BR 2004015361	A	20061212	BR 2004-15361	20041012
	CN 1893948	A	20070110	CN 2004-80037266	20041012
	JP 2007508390	T	20070405	JP 2006-535591	20041012
	IN 2006DN01834	A	20070824	IN 2006-DN1834	20060404
	US 2007105895	A1	20070510	US 2006-575839	20060413
	US 7276521	B2	20071002		
	MX 2006PA04244	A	20060628	MX 2006-PA4244	20060417
	NO 2006002042	A	20060508	NO 2006-2042	20060508
	US 2007238752	A1	20071011	US 2007-766371	20070621
	US 2007244150	A1	20071018	US 2007-766318	20070621
	AU 2007203077	A1	20070719	AU 2007-203077	20070702
	AU 2007203078	A1	20070719	AU 2007-203078	20070702
	JP 2007277276	A	20071025	JP 2007-201718	20070802
PRAI	US 2003-511009P	P	20031014		
	AU 2004-281724	A3	20041012		
	JP 2006-535591	A3	20041012		
	WO 2004-US33638	W	20041012		
	US 2006-575839	A1	20060413		

OS MARPAT 142:423894
AB 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists are provided. Compound preparation is included. Compds. of the invention may be used to treat muscarinic acetylcholine receptor-mediated diseases.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:369242 CAPLUS
DN 142:423890
TI 8-Methyl-8-aza-bicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists, their preparation, and their therapeutic use
IN Palovich, Michael R.; Wan, Zehong; Zhu, Chongjie
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005037224	A2	20050428	WO 2004-US34234	20041015
	WO 2005037224	A3	20050623		
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	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004281167	A1	20050428	AU 2004-281167	20041015
	CA 2542636	A1	20050428	CA 2004-2542636	20041015
	EP 1677796	A2	20060712	EP 2004-795406	20041015
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	BR 2004015281	A	20061219	BR 2004-15281	20041015
	CN 1897947	A	20070117	CN 2004-80038046	20041015
	JP 2007509061	T	20070412	JP 2006-535384	20041015
	IN 2006DN01989	A	20070803	IN 2006-DN1989	20060412
	US 2007135478	A1	20070614	US 2006-575837	20060413
	KR 2007017965	A	20070213	KR 2006-707165	20060414
	MX 2006PA04242	A	20060628	MX 2006-PA4242	20060417
	NO 2006002071	A	20060508	NO 2006-2071	20060508
PRAI	US 2003-512161P	P	20031017		
	WO 2004-US34234	W	20041015		

OS MARPAT 142:423890
AB 8-Methyl-8-aza-bicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists are provided. Compound preparation is included. The compds. of the invention may be used to treat muscarinic acetylcholine receptor-mediated diseases.

L11 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:99356 CAPLUS
DN 142:183482
TI Muscarinic acetylcholine receptor antagonists
IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005009439	A1	20050203	WO 2004-US22947	20040716
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004259232	A1	20050203	AU 2004-259232	20040716
	CA 2532375	A1	20050203	CA 2004-2532375	20040716
	EP 1648460	A1	20060426	EP 2004-778451	20040716
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
	CN 1822838	A	20060823	CN 2004-80020649	20040716
	BR 2004012716	A	20060926	BR 2004-12716	20040716
	JP 2007523877	T	20070823	JP 2006-520377	20040716
	IN 2006DN00074	A	20070824	IN 2006-DN74	20060104
	MX 2006PA00662	A	20060330	MX 2006-PA662	20060117
	US 2006178395	A1	20060810	US 2006-565046	20060117
	NO 2006000775	A	20060411	NO 2006-775	20060217
PRAI	US 2003-487981P	P	20030717		
	WO 2004-US22947	W	20040716		

OS MARPAT 142:183482
AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2,2-diphenylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:99316 CAPLUS
DN 142:183475
TI Muscarinic acetylcholine receptor antagonists
IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005009362	A2	20050203	WO 2004-US23041	20040716
	WO 2005009362	A3	20050407		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004259238	A1	20050203	AU 2004-259238	20040716
	CA 2532433	A1	20050203	CA 2004-2532433	20040716
	EP 1648461	A2	20060426	EP 2004-778509	20040716
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
	CN 1822839	A	20060823	CN 2004-80020652	20040716
	BR 2004012537	A	20060919	BR 2004-12537	20040716
	JP 2007525478	T	20070906	JP 2006-520387	20040716
	IN 2006DN00077	A	20070824	IN 2006-DN77	20060104
	MX 2006PA00663	A	20060330	MX 2006-PA663	20060117
	US 2006178396	A1	20060810	US 2006-565048	20060117
	NO 2006000777	A	20060411	NO 2006-777	20060217
PRAI	US 2003-487982P	P	20030717		
	WO 2004-US23041	W	20040716		
OS	MARPAT 142:183475				

AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2-hydroxy-2,2-diphenylethyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.

L11 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:96456 CAPLUS
DN 142:183437
TI Muscarinic acetylcholine receptor antagonists
IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005009440	A1	20050203	WO 2004-US23042	20040716
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	AU 2004259239	A1	20050203	AU 2004-259239	20040716
	CA 2532379	A1	20050203	CA 2004-2532379	20040716
	EP 1648462	A1	20060426	EP 2004-778510	20040716
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	CN 1822840	A	20060823	CN 2004-80020653	20040716
	BR 2004012679	A	20061003	BR 2004-12679	20040716
	IN 2006DN00080	A	20070824	IN 2006-DN80	20060104
	MX 2006PA00664	A	20060330	MX 2006-PA664	20060117
	US 2006160844	A1	20060720	US 2006-565049	20060117
	NO 2006000776	A	20060411	NO 2006-776	20060217
PRAI	US 2003-488061P	P	20030717		
	WO 2004-US23042	W	20040716		
OS	MARPAT 142:183437				

AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2,2-diphenylethyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:902087 CAPLUS
DN 141:379801
TI A preparation of naphthalele-1,4-imine derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
IN Busch-Petersen, Jakob; Laine, Dramane L.; Palovich, Michael R.; McCleland, Brent W.
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004091482	A2	20041028	WO 2004-US10641	20040407
	WO 2004091482	A3	20041223		
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	WO 2005095407	A1	20051013	WO 2004-US8027	20040317
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	WO 2005094835	A1	20051013	WO 2004-US8032	20040317
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	EP 1725564	A1	20061129	EP 2004-821846	20040317
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	EP 1725241	A1	20061129	EP 2004-821848	20040317
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	JP 2007529513	T	20071025	JP 2007-503877	20040317
	JP 2007529514	T	20071025	JP 2007-503878	20040317
	EP 1613307	A2	20060111	EP 2004-749817	20040407
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	JP 2006522161	T	20060928	JP 2006-509761	20040407
	US 2006211758	A1	20060921	US 2005-552492	20051007

L11 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

	US 7232841	B2	20070619		
	US 2007149598	A1	20070628	US 2006-598882	20060914
	US 2007185088	A1	20070809	US 2006-598888	20060914
PRAI	US 2003-460860P	P	20030407		
	WO 2004-US8027	W	20040317		
	WO 2004-US8032	W	20040317		
	WO 2004-US10641	W	20040407		
OS	MARPAT 141:379801				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a preparation of novel naphthalele-1,4-imine derivs. of formula I [wherein: R is H, halogen, alkyl, alkanoyl, or aroyl; Y is alkyl, (CH2)2-(cyclohex-1,4-diyl), or CH2-(cyclohex-1,4-diyl)-CH2, etc.; Z is (CH2)2 or CH:CH; X is -Q-Ar-Q- or -Q-L-Q-; Q is a bond, alkyl, or O-alkyl, etc.; Ar is (un)substituted Ph or 5-6-membered aromatic heterocyclic ring; L is a bond or (cyclo)alkyl], useful for the treatment of M3 muscarinic receptor antagonists (no biol. data). For instance, naphthalele-1,4-imine derivative II was prepared via amidation of 1,2-benzenediacetic acid by cyclohexylamine derivative III with a yield of 18% (example 1).

L11 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:120688 CAPLUS
DN 140:181438
TI Preparation of piperidinylmethyl (thiazolyl)phenylcarbamates as M3 muscarinic acetylcholine receptor antagonists
IN Laine, Dramane I.; Bell, Ricahrd; Busch-Petersen, Jakob ; Palovich, Michael
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004012684	A2	20040212	WO 2003-US24569	20030806
	WO 2004012684	A3	20040624		
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	AU 2003261392	A1	20040223	AU 2003-261392	20030806
	EP 1549278	A2	20050706	EP 2003-767232	20030806
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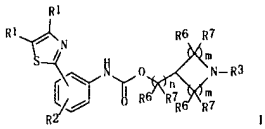
	JP 2006505517	T	20060216	JP 2004-526043	20030806
	US 2005277676	A1	20051215	US 2005-523478	20050204
PRAI	US 2002-401756P	P	20020806		
	WO 2003-US24569	W	20030806		

OS MARPAT 140:181438
GI



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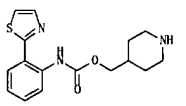

II

AB Title compds. I [wherein R1 = halogen, alkyl, CH2F, CHF2; R2 = H, OH,

L11 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
alkyl, aryl, halogen, alkoxy; R3 = H, (cyclo)alkyl, alkenyl, alkenylaryl, (un)substituted alkylaryl, cycloalkylalkyl; R6, R7 = independently H, alkyl; or R6 and R7 together form an (un)substituted (hetero)cyclic ring; n = 1-2; m = 1-2] were prepd. For example, reaction of tert-Bu 4-[[[(2-bromophenyl)amino]carbonyloxy]methyl]piperidine-1-carboxylate with bis(pinacolato)diboron, followed by coupling reaction with 2-bromothiazole and deprotection with CF3CO2H, afford II•CF3CO2H. Thus, I and their pharmaceutical compns. are useful as M3 muscarinic acetylcholine receptor antagonists for the treatment of chronic obstructive lung disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, pulmonary emphysema, and allergic rhinitis, irritable bowel syndrome, spasmodic colitis, gastroduodenal ulcers, gastrointestinal convulsions or hyperanakinesia, diverticulitis, pain accompanying spasms of gastrointestinal smooth musculature; urinary-tract disorders accompanying micturition disorders, neurogenic pollakiuria, neurogenic bladder, nocturnal enuresis, psychosomatic bladder, incontinence assocd. with bladder spasms or chronic cystitis, urinary urgency or pollakiuria, and motion sickness (no data).

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